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MEMORANDUM REPORT NO. 1478

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A. D. Groves

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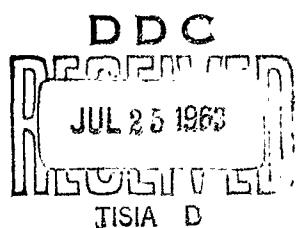
BALLISTIC RESEARCH LABORATORIES

ABERDEEN PROVING GROUND, MARYLAND

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Weapons Systems Laboratory

ABERDEEN PROVING GROUND, MARYLAND

B A L L I S T I C   R E S E A R C H   L A B O R A T O R I E S

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ADGroves/djt
Aberdeen Proving Ground, Md.
April 1963

AREA OF INTERSECTION OF AN ELLIPSE AND A RECTANGLE

ABSTRACT

A method is given for computing the area of intersection of an ellipse and a rectangle whose sides are parallel to the axes of the ellipse. This method is presented in a form amenable to programming for high speed computation, but tables are included to facilitate hand computations. This method has been used in the evaluation of the effectiveness of small arms, but would have application in the evaluation of area kill weapons as well.

INTRODUCTION

A problem which has arisen in the course of devising mathematical methods for the evaluation of small arms is that of determining the area common to an ellipse and a rectangle, where the axes of the ellipse are parallel to the sides of the rectangle. In particular, this problem arises when a target (a man) is represented by a rectangle and consideration is given to firing at him with a multiple projectile round (such as a shotgun) where the projectiles are assumed to be uniformly, but randomly, distributed throughout an ellipse, so that the probability that any one of the projectiles hits the target is simply the fraction of the area of the ellipse which is common to that of the rectangle. The formulae which were generated to compute the area of overlap are felt to be of interest in other areas of weapons effectiveness, such as the evaluation of area kill weapons, and perhaps even of some interest from the viewpoint of basic mathematics. The method to be presented here lends itself well to high speed electronic computation, and will be presented with the programmer in mind.

This method is based on unpublished notes dated January 1960 by Alvin Eittreim (who recently retired from BRL) in which he derived the formulas for computing the area common to a circle with unit radius centered at the origin and a rectangle entirely within the first quadrant. He suggested, without providing the necessary mathematical transformations, that any rectangle could be considered simply by breaking it into sub-rectangles, each being that part of the original rectangle lying in one of the four quadrants, and then, for each part, considering an equivalent first-quadrant rectangle to compute the coverage. The present study follows this suggestion, providing the necessary transformations, as well as providing a more general result in that instead of being restricted to a unit circle, a general ellipse is considered.

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In addition, the resulting formulas giving the area of intersection are somewhat simpler to use than were Eittreim's both in hand computation and machine computation. However, the general approach taken is the one he followed in his notes of January 1960.

METHOD

Let the ellipse be centered at the origin of the usual x, y rectangular coordinate system, so that its equation is

$$\left(\frac{x}{A}\right)^2 + \left(\frac{y}{B}\right)^2 = 1 \quad ,$$ where A and B are the semi-axes in the x

and y directions respectively, and let the rectangle have width W (in the x direction) and height H (in the y direction) and be centered at an arbitrary point whose coordinates are $(\bar{x}, \bar{y})$. Then the coordinates of the vertices of the rectangle are

$$\left(\bar{x} - \frac{W}{2} , \bar{y} - \frac{H}{2}\right) \quad ,$$

$$\left(\bar{x} - \frac{W}{2} , \bar{y} + \frac{H}{2}\right) \quad ,$$

$$\left(\bar{x} + \frac{W}{2} , \bar{y} + \frac{H}{2}\right) \quad , \qquad \text{and}$$

$$\left(\bar{x} + \frac{W}{2} , \bar{y} - \frac{H}{2}\right) \quad .$$

Figure 1 illustrates the general situation. The rectangle will now be broken into four rectangular areas, some of which may be zero. These, denoted A_i (i=1, 2, 3, 4), are simply the portions of the original rectangle which are in each of the four quadrants defined by the coordinate axes. Now, for each i, let S_i be the area of intersection of A_i and the ellipse. If S denotes the total area of intersection, which is the desired result, then

$$S = \sum_{i=1}^{4} S_i \quad .$$

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Figure 1   General Situation

$$\left(\overline{x} - \frac{W}{2},\ \overline{y} + \frac{H}{2}\right)$$

$$\left(\overline{x} + \frac{W}{2},\ \overline{y} + \frac{H}{2}\right)$$

$$\left(\frac{x}{A}\right)^2 + \left(\frac{y}{B}\right)^2 = 1$$

Y

X

$(\overline{x}, \overline{y})$

H

W

$$\left(\overline{x} - \frac{W}{2},\ \overline{y} - \frac{H}{2}\right)$$

$$\left(\overline{x} + \frac{W}{2},\ \overline{y} - \frac{H}{2}\right)$$
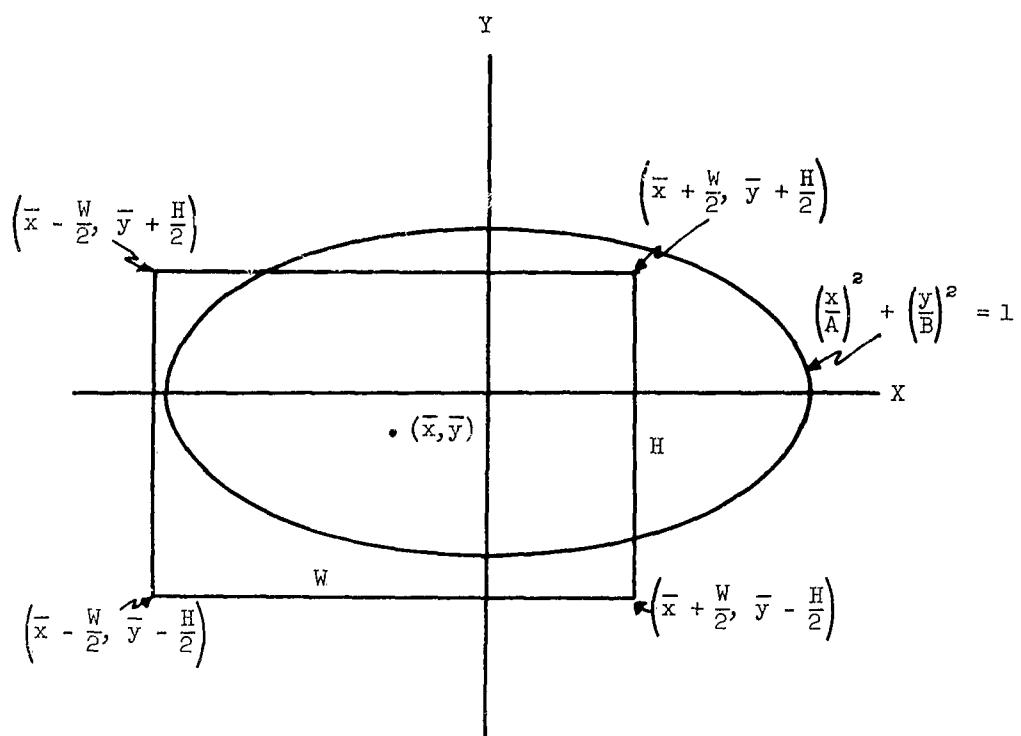
Thus the problem is reduced to computing the S_i. The basic scheme for computing an S_i assumes that the area A_i is entirely within the first quadrant. Thus it is required to obtain, for each area A_i, another area A_i^1, wholly within the first quadrant, which has the same area of intersection with the ellipse as A_i, namely S_i. Each first quadrant rectangular area A_i^1 will be specified by four non-negative numbers (a_i, b_i, c_i, d_i), where (a_i, b_i) are the coordinates of the vertex of A_i^1 closest to the origin, c_i is the width (in the x direction) of A_i^1, and d_i is the height (in the y direction) of A_i^1. This representation is illustrated in Figure 2, where the coordinates of the four vertices of A_i^1 are given. The next step is to represent the rectangular areas A_i^1 (or, more particularly, the four sets of numbers a_i, b_i, c_i, d_i) in terms of the coordinates of the vertices of the original rectangular areas A_i. The following definitions can be seen to be applicable simply by enumerating all cases. (There are nine possible cases, depending on the position of the original rectangular area. These are: 1, 2, 3, 4 - original rectangle completely in 1st, 2nd, 3rd, or 4th quadrant; 5 - original rectangle partly in 1st and partly in 2nd quadrants; 6 - original rectangle partly in 2nd and partly in 3rd quadrants; 7 - original rectangle partly in 3rd and partly in 4th quadrant; 8 - original rectangle partly in 4th quadrant and partly in 1st quadrant; and 9 - one vertex of original rectangle in each of the four quadrants.)

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Figure 2   Representation of A_i^1
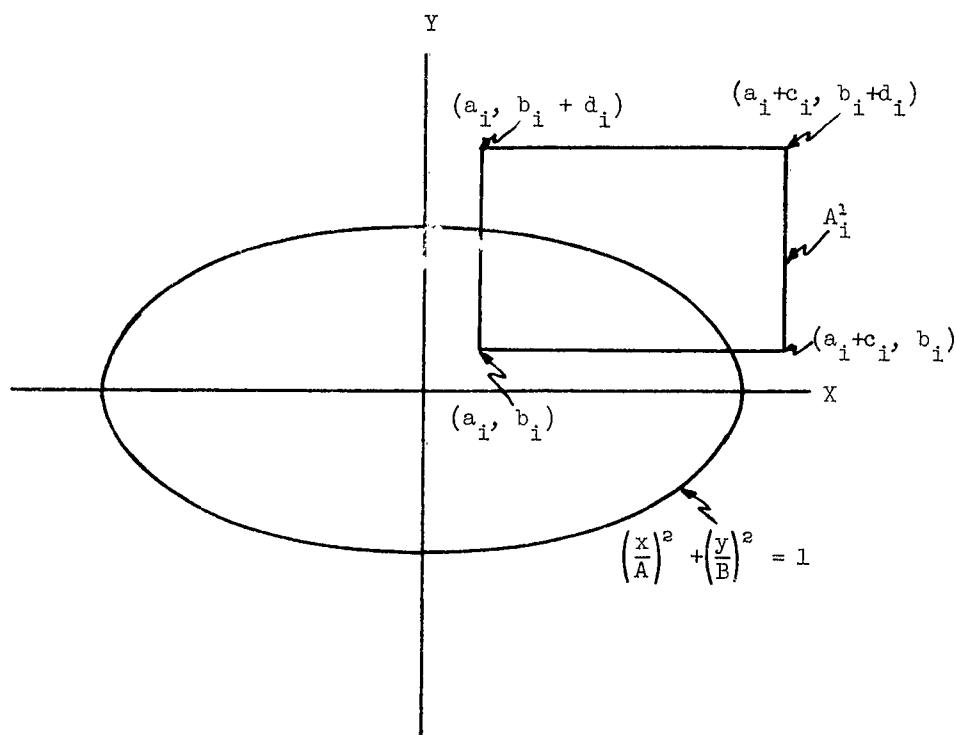
$A_1^1:$

$$a_1 = \max \left\{0, \quad \bar{x} - \frac{W}{2}\right\}$$

$$b_1 = \max \left\{0, \quad \bar{y} - \frac{H}{2}\right\}$$

$$c_1 = \max \left\{0, \quad \bar{x} + \frac{W}{2} - a_1\right\}$$

$$d_1 = \max \left\{0, \quad \bar{y} + \frac{H}{2} - b_1\right\}$$

$A_2^1:$

$$a_2 = \max \left\{0, \quad -\bar{x} - \frac{W}{2}\right\}$$

$$b_2 = \max \left\{0, \quad \bar{y} - \frac{H}{2}\right\}$$

$$c_2 = \max \left\{0, \quad -\bar{x} + \frac{W}{2} - a_2\right\}$$

$$d_2 = \max \left\{0, \quad \bar{y} + \frac{H}{2} - b_2\right\}$$

$A_3^1:$

$$a_3 = \max \left\{0, \quad -\bar{x} - \frac{W}{2}\right\}$$

$$b_3 = \max \left\{0, \quad -\bar{y} - \frac{H}{2}\right\}$$

$$c_3 = \max \left\{0, \quad -\bar{x} + \frac{W}{2} - a_3\right\}$$

$$d_3 = \max \left\{0, \quad -\bar{y} + \frac{H}{2} - b_3\right\}$$

$A_4^1:$

$$a_4 = \max \left\{0, \quad \bar{x} - \frac{W}{2}\right\}$$

$$b_4 = \max \left\{0, \quad -\bar{y} - \frac{H}{2}\right\}$$

$$c_4 = \max \left\{0, \quad \bar{x} + \frac{W}{2} - a_4\right\}$$

$$d_4 = \max \left\{0, \quad -\bar{y} + \frac{H}{2} - b_4\right\}$$

For programming purposes, it may be desirable to express these numbers more generally, where the four numbers defining A_i^1 can be computed as a function of i. The following generalization, although somewhat artificial, works.

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$$A_i^1: \qquad a_i = \max \left\{ 0, \ (-1)^{\frac{1}{2}(i^2-i)} \ \bar{x} - \frac{W}{2} \right\}$$

$$b_i = \max \left\{ 0, \ (-1)^{\frac{1}{2}(i^2+i-2)} \ \bar{y} - \frac{H}{2} \right\}$$

$$c_i = \max \left\{ 0, \ (-1)^{\frac{1}{2}(i^2-i)} \ \bar{x} + \frac{W}{2} - a_i \right\}$$

$$d_i = \max \left\{ 0, \ (-1)^{\frac{1}{2}(i^2+i-2)} \ \bar{y} + \frac{H}{2} - b_i \right\}$$

(The quantity $\max \left\{ 0, \ M \right\}$ is defined to be either 0 or M, whichever is larger.)

Now the problem has been reduced to computing four areas of overlap (some or all of which may be zero), for each of which the rectangle is entirely within the first quadrant. For convenience of notation, the subscript i will be dropped, and a method will be given for computing

$$S = S(a, \ b, \ c, \ d, \ A, \ B) \quad,$$ where S is the area of intersection of the ellipse and a rectangle entirely within the first quadrant.

Let the four vertices of the rectangle be indexed in the following manner according to their coordinates:

V_1: (a,b)

V_2: (a, b+d)

V_3: (a+c, b+d)

V_4: (a+c, b)

If either c=0 or d=0, then S=0, since the rectangle either has zero width or zero length and hence no area. Thus the following formulae need be used only if neither c nor d is zero.

There are six cases to be considered, depending on which vertices are inside the ellipse. These are :

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Case I   - No vertices inside the ellipse

Case II   - V_1 inside; V_2, V_3 and V_4 outside

Case III - V_1 and V_4 inside; V_2 and V_3 outside

Case IV   - V_1 and V_2 inside; V_3 and V_4 outside

Case V   - V_1, V_2 and V_4 inside; V_3 outside

Case VI   - All vertices inside the ellipse.

Case I - This case is identified by the condition

$$\left(\frac{a}{A}\right)^2 + \left(\frac{b}{B}\right)^2 \geq 1 \ ,$$

which indicates that V_1, the vertex closest to the origin, is outside the ellipse. If V_1 is outside the ellipse, then all others will be also, and the area of overlap, denoted S_I, is obviously

$$S_I = 0$$

The following sketch illustrates this case:

Case I

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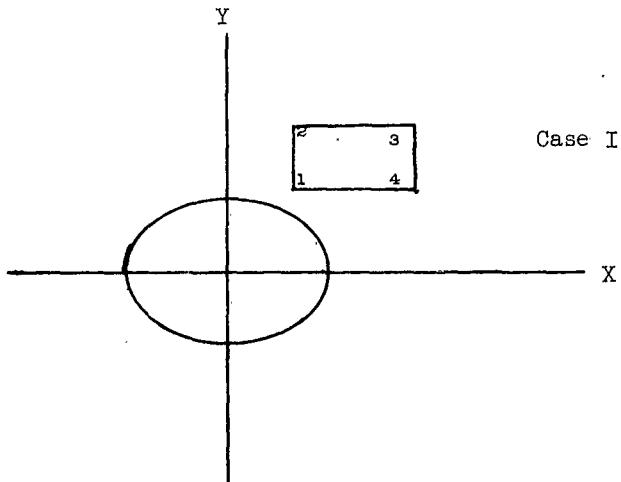
Case II – In this case V_1 is inside the ellipse, but all other vertices are outside. The condition for V_1 to be inside the ellipse is

$$\left(\frac{a}{A}\right)^2 + \left(\frac{b}{B}\right)^2 < 1 .$$

The vertex V_3 will obviously be outside the ellipse if V_2 and V_4 are. Thus two more conditions are required to identify Case II. These are

$$\left(\frac{a}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 \geq 1 \qquad (V_2 \text{ outside}),$$

$$\left(\frac{a+c}{A}\right)^2 + \left(\frac{b}{B}\right)^2 \geq 1. \qquad (V_4 \text{ outside})$$

The following sketch illustrates Case II:

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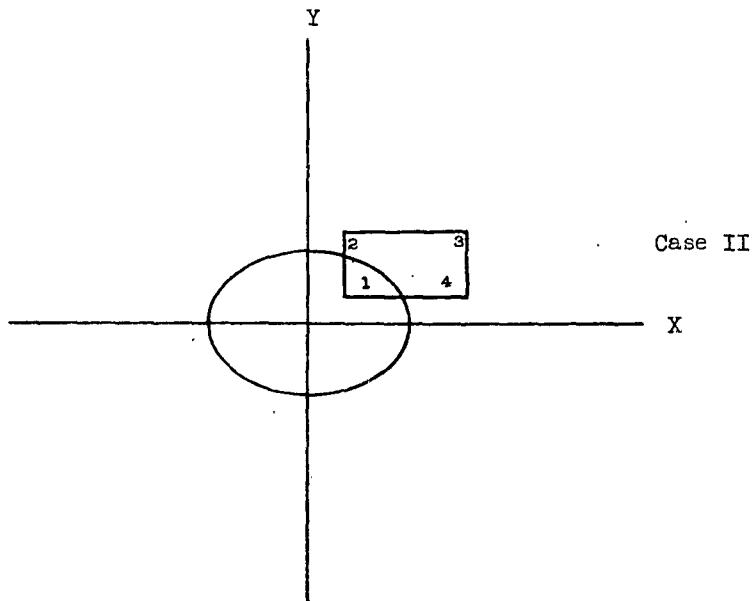
The result for this case will be used as a basis for all other cases (except Case VI), so will be analyzed in detail. Let S_{II} be the desired area of intersection. Then

$$S_{II} = \int_{x=a}^{\frac{A}{B}\sqrt{B^2-b^2}} \int_{y=b}^{\frac{B}{A}\sqrt{A^2-x^2}} dy\ dx$$

which is easily integrated to give

$$S_{II} = \frac{AB}{2}\left[\sin^{-1}\sqrt{1-\left(\frac{b}{B}\right)^2} - \sin^{-1}\left(\frac{a}{A}\right) - \left(\frac{a}{A}\right)\sqrt{1-\left(\frac{a}{A}\right)^2} - \left(\frac{b}{B}\right)\sqrt{1-\left(\frac{b}{B}\right)^2} + 2\left(\frac{a}{A}\right)\left(\frac{b}{B}\right) \right]$$

For a further simplification, let

$$\theta = \sin^{-1}\sqrt{1-\left(\frac{b}{B}\right)^2} - \sin^{-1}\left(\frac{a}{A}\right)$$

Then $\sin\theta = \sqrt{1-\left(\frac{b}{B}\right)^2}\sqrt{1-\left(\frac{a}{A}\right)^2} - \left(\frac{a}{A}\right)\left(\frac{b}{B}\right)$

or $\theta = \sin^{-1}\left\{ \sqrt{1-\left(\frac{b}{B}\right)^2}\sqrt{1-\left(\frac{a}{A}\right)^2} - \left(\frac{a}{A}\right)\left(\frac{b}{B}\right) \right\}$

Thus

$$S_{II} = \frac{AB}{2}\ F\left(\frac{a}{A},\ \frac{b}{B}\right)$$

where $F(U,V) = \sin^{-1}\left[\sqrt{1-U^2}\sqrt{1-V^2} - UV\right] -U\sqrt{1-U^2} - V\sqrt{1-V^2} + 2UV$

Case III - In this case V_4 (and thus V_1) are inside the ellipse, and V_2 (and thus V_3) are outside, as illustrated in the following diagram:
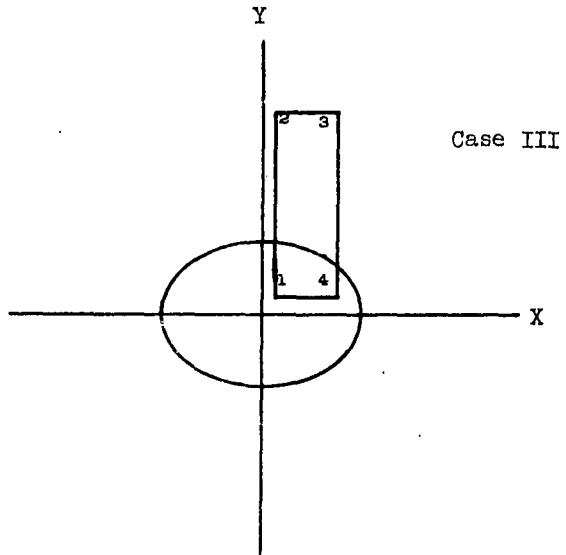
Case III

This situation is identified by the mathematical conditions

$$\left(\frac{a+c}{A}\right)^2 + \left(\frac{b}{B}\right)^2 < 1 \qquad (V_4 \text{ inside})$$

and $\qquad \left(\frac{a}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 \geqq 1 \qquad (V_2 \text{ outside}).$

Now note that the area S_{III} can be considered as the difference between two areas of the type considered in Case II, as illustrated in the following diagram:
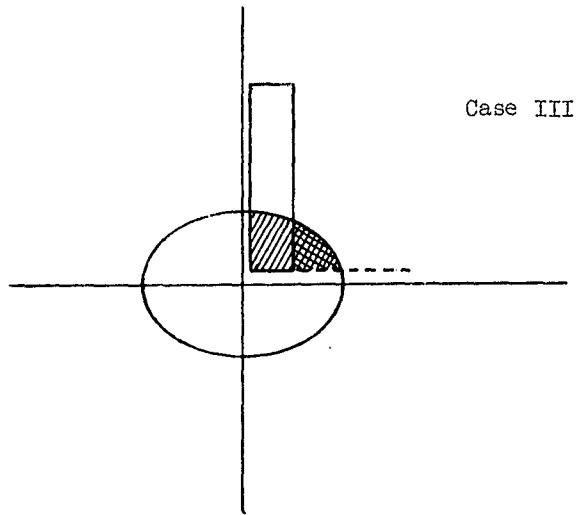
Case III

The total area (single crosshatched plus double crosshatched) is simply

$$\frac{AB}{2} F\left(\frac{a}{A}, \frac{b}{B}\right)$$ according to the Case II result. The double cross-

hatched area, again by Case II, is

$$\frac{AB}{2} F\left(\frac{a+c}{A}, \frac{b}{B}\right).$$

Thus the desired area S_{III} (single crosshatched) is given by

$$S_{III} = \frac{AB}{2}\left[F\left(\frac{a}{A}, \frac{b}{B}\right) - F\left(\frac{a+c}{A}, \frac{b}{B}\right)\right].$$

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Case IV - Case IV is similar to Case III in that two vertices are inside the ellipse and two are outside, except that in Case IV, V_1 and V_2 are inside. The two conditions sufficient to identify this case are

$$\left(\frac{a}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 < 1 \qquad (V_2 \text{ inside})$$

and

$$\left(\frac{a+c}{A}\right)^2 + \left(\frac{b}{B}\right)^2 \geq 1 \qquad (V_4 \text{ outside}) .$$

Of course, V_1 must be inside if V_2 is, and V_3 must be outside if V_4 is, so only two conditions are necessary to place all four vertices. The following sketch illustrates this case
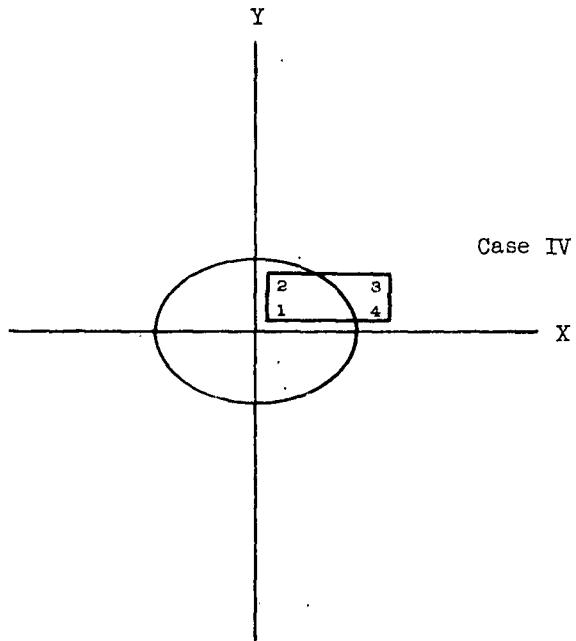
Case IV

In a manner similar to that discussed in Case III, the area S_{IV} can be considered to be the difference between two areas computed by the result given in Case II. Without further detail, then,

$$S_{IV} = \frac{AB}{2} \left[F\left(\frac{a}{A}, \frac{b}{B}\right) - F\left(\frac{a}{A}, \frac{b+d}{B}\right) \right] \quad .$$

Case V - In Case V all of the vertices are inside the ellipse except V_3, as illustrated in the following sketch

Case V
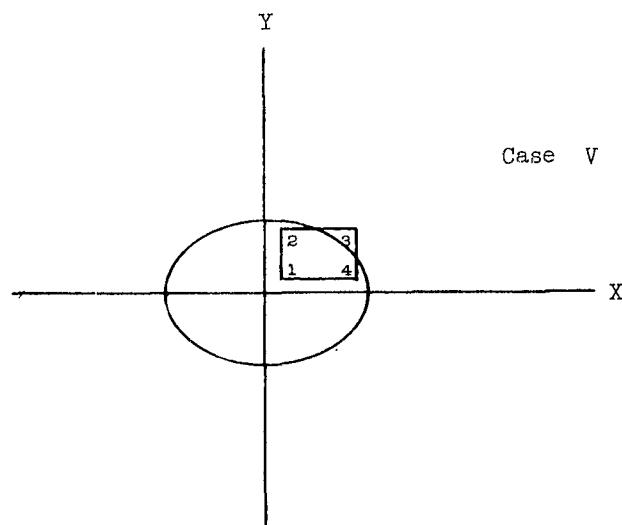
Three conditions are required to identify this case, namely

$$\left(\frac{a}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 < 1 \qquad (V_2 \text{ inside})$$

$$\left(\frac{a+c}{A}\right)^2 + \left(\frac{b}{B}\right)^2 < 1 \qquad (V_4 \text{ inside})$$

$$\text{and} \left(\frac{a+c}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 > 1 \qquad (V_3 \text{ outside}) \quad .$$

As in the previous two cases, S_V is computed by taking the differences between certain areas computed by the result given in Case II. Thus

$$S_V = \frac{AB}{2} \left[F\left(\frac{a}{A}, \frac{b}{B}\right) - F\left(\frac{a+c}{A}, \frac{b}{B}\right) - F\left(\frac{a}{A}, \frac{b+d}{B}\right) \right]$$

Case VI - Here all vertices are inside the ellipse, and only one condition is required to identify the case, i.e., that condition indicating that V_3 is inside. This condition is

$$\left(\frac{a+c}{A}\right)^2 + \left(\frac{b+d}{B}\right)^2 \leqq 1$$

In this case, illustrated in the following sketch, the area S_{VI} is simply the area of the rectangle. Thus

$$S_{VI} = cd$$

Y

Case VI

X
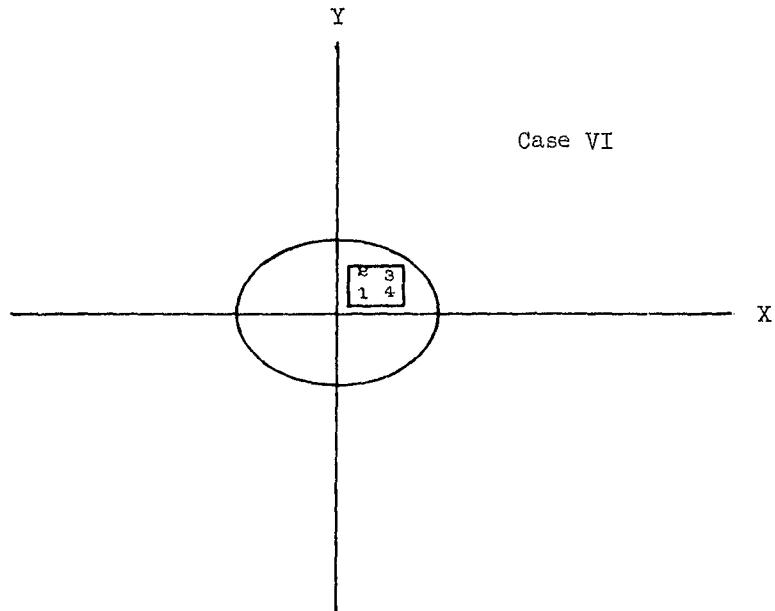
TABULATION OF F(U,V)

It is clear that the major part of the computation of S is the
evaluation of the function F(U,V), which may have to be made as many
as twelve times in the course of computing a single S. For this
reason a table is included giving values of F(U,V) as both U and V
vary from zero to one at .01 intervals.

A. D. GROVES

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U=.00-.10
V=.00-.50

V	U 0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
.00	1.57080	1.55080	1.53080	1.51081	1.49082	1.47084	1.45087	1.43091	1.41097	1.39104	1.37113
.01	1.55080	1.53100	1.51120	1.49141	1.47162	1.45184	1.43207	1.41231	1.39257	1.37284	1.35313
.02	1.53080	1.51120	1.49160	1.47201	1.45242	1.43284	1.41327	1.39371	1.37417	1.35464	1.33513
.03	1.51081	1.49141	1.47201	1.45261	1.43323	1.41385	1.39448	1.37512	1.35578	1.33645	1.31714
.04	1.49082	1.47162	1.45242	1.43323	1.41404	1.39486	1.37569	1.35653	1.33739	1.31826	1.29915
.05	1.47084	1.45184	1.43284	1.41385	1.39486	1.37588	1.35691	1.33795	1.31901	1.30008	1.28117
.06	1.45087	1.43207	1.41327	1.39448	1.37569	1.35691	1.33814	1.31938	1.30064	1.28191	1.26320
.07	1.43091	1.41231	1.39371	1.37512	1.35653	1.33795	1.31938	1.30083	1.28228	1.26375	1.24524
.08	1.41097	1.39257	1.37417	1.35578	1.33739	1.31901	1.30064	1.28228	1.26394	1.24561	1.22730
.09	1.39104	1.37284	1.35464	1.33645	1.31826	1.30008	1.28191	1.26375	1.24561	1.22748	1.20937
.10	1.37113	1.35313	1.33513	1.31714	1.29915	1.28117	1.26320	1.24524	1.22730	1.20937	1.19146
.11	1.35124	1.33344	1.31564	1.29785	1.28006	1.26228	1.24451	1.22676	1.20901	1.19128	1.17357
.12	1.33137	1.31377	1.29618	1.27858	1.26099	1.24342	1.22585	1.20829	1.19074	1.17322	1.15571
.13	1.31153	1.29413	1.27673	1.25934	1.24195	1.22457	1.20720	1.18984	1.17250	1.15517	1.13786
.14	1.29171	1.27451	1.25732	1.24012	1.22294	1.20576	1.18859	1.17143	1.15428	1.13716	1.12005
.15	1.27193	1.25493	1.23793	1.22093	1.20395	1.18697	1.17000	1.15304	1.13610	1.11917	1.10226
.16	1.25217	1.23537	1.21857	1.20178	1.18499	1.16821	1.15144	1.13468	1.11794	1.10121	1.08450
.17	1.23244	1.21584	1.19924	1.18265	1.16606	1.14948	1.13291	1.11636	1.09981	1.08328	1.06678
.18	1.21275	1.19635	1.17995	1.16356	1.14717	1.13079	1.11442	1.09806	1.08172	1.06539	1.04908
.19	1.19310	1.17690	1.16070	1.14450	1.12832	1.11214	1.09597	1.07981	1.06367	1.04754	1.03143
.20	1.17348	1.15748	1.14148	1.12549	1.10950	1.09352	1.07755	1.06159	1.04565	1.02972	1.01381
.21	1.15390	1.13810	1.12231	1.10651	1.09073	1.07495	1.05918	1.04342	1.02767	1.01195	0.99624
.22	1.13437	1.11877	1.10317	1.08758	1.07199	1.05641	1.04084	1.02529	1.00974	0.99422	0.97871
.23	1.11488	1.09949	1.08409	1.06869	1.05331	1.03793	1.02256	1.00720	0.99186	0.97653	0.96122
.24	1.09544	1.08025	1.06505	1.04985	1.03467	1.01949	1.00432	0.98916	0.97402	0.95889	0.94378
.25	1.07605	1.06105	1.04606	1.03106	1.01608	1.00110	0.98613	0.97117	0.95623	0.94130	0.92639
.26	1.05672	1.04192	1.02712	1.01232	0.99754	0.98276	0.96799	0.95323	0.93849	0.92376	0.90905
.27	1.03743	1.02283	1.00823	0.99364	0.97905	0.96447	0.94990	0.93535	0.92080	0.90627	0.89176
.28	1.01820	1.00380	0.98940	0.97501	0.96062	0.94624	0.93187	0.91752	0.90317	0.88885	0.87454
.29	0.99903	0.98483	0.97063	0.95644	0.94225	0.92807	0.91390	0.89975	0.88560	0.87148	0.85737
.30	0.97992	0.96592	0.95192	0.93793	0.92394	0.90996	0.89599	0.88204	0.86809	0.85417	0.84026
.31	0.96087	0.94708	0.93328	0.91948	0.90570	0.89192	0.87815	0.86439	0.85065	0.83692	0.82321
.32	0.94189	0.92829	0.91470	0.90110	0.88751	0.87393	0.86037	0.84681	0.83326	0.81974	0.80623
.33	0.92298	0.90958	0.89618	0.88279	0.86940	0.85602	0.84265	0.82929	0.81595	0.80262	0.78931
.34	0.90413	0.89094	0.87774	0.86454	0.85136	0.83818	0.82501	0.81185	0.79871	0.78558	0.77247
.35	0.88536	0.87236	0.85937	0.84637	0.83338	0.82040	0.80743	0.79448	0.78153	0.76861	0.75570
.36	0.86667	0.85387	0.84107	0.82827	0.81549	0.80271	0.78994	0.77718	0.76444	0.75171	0.73900
.37	0.84805	0.83545	0.82285	0.81025	0.79767	0.78509	0.77252	0.75996	0.74742	0.73489	0.72238
.38	0.82951	0.81711	0.80471	0.79231	0.77993	0.76755	0.75518	0.74282	0.73048	0.71815	0.70584
.39	0.81105	0.79885	0.78665	0.77446	0.76227	0.75009	0.73792	0.72576	0.71362	0.70149	0.68938
.40	0.79267	0.78067	0.76868	0.75668	0.74469	0.73272	0.72075	0.70879	0.69684	0.68492	0.67301
.41	0.77439	0.76259	0.75079	0.73900	0.72721	0.71543	0.70366	0.69190	0.68016	0.66843	0.65672
.42	0.75619	0.74459	0.73299	0.72140	0.70981	0.69823	0.68666	0.67511	0.66356	0.65203	0.64052
.43	0.73809	0.72669	0.71529	0.70390	0.69251	0.68113	0.66976	0.65840	0.64706	0.63573	0.62442
.44	0.72008	0.70888	0.69768	0.68649	0.67530	0.66412	0.65295	0.64179	0.63065	0.61952	0.60841
.45	0.70217	0.69117	0.68017	0.66918	0.65819	0.64721	0.63624	0.62528	0.61434	0.60341	0.59250
.46	0.68436	0.67356	0.66276	0.65197	0.64118	0.63040	0.61963	0.60887	0.59813	0.58740	0.57669
.47	0.66665	0.65605	0.64546	0.63486	0.62427	0.61369	0.60312	0.59257	0.58202	0.57150	0.56099
.48	0.64905	0.63865	0.62826	0.61786	0.60747	0.59709	0.58672	0.57637	0.56602	0.55570	0.54539
.49	0.63156	0.62136	0.61117	0.60097	0.59078	0.58060	0.57043	0.56028	0.55013	0.54001	0.52990
.50	0.61418	0.60419	0.59419	0.58419	0.57421	0.56423	0.55426	0.54430	0.53436	0.52443	0.51452

U	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
V											
.50	0.61418	0.60419	0.59419	0.58419	0.57421	0.56423	0.55426	0.54430	0.53436	0.52443	0.51
.51	0.59692	0.58712	0.57733	0.56753	0.55774	0.54796	0.53819	0.52844	0.51869	0.50897	0.4992
.52	0.57978	0.57018	0.56058	0.55099	0.54140	0.53182	0.52225	0.51269	0.50315	0.49362	0.484
.53	0.56276	0.55336	0.54396	0.53457	0.52518	0.51580	0.50643	0.49707	0.48773	0.47840	0.4690
.54	0.54586	0.53666	0.52746	0.51827	0.50908	0.49990	0.49073	0.48157	0.47243	0.46330	0.455
.55	0.52909	0.52009	0.51109	0.50210	0.49311	0.48413	0.47516	0.46621	0.45726	0.44833	0.43
.56	0.51245	0.50366	0.49486	0.48606	0.47728	0.46850	0.45973	0.45097	0.44223	0.43350	0.42477
.57	0.49595	0.48735	0.47876	0.47016	0.46157	0.45299	0.44443	0.43587	0.42732	0.41880	0.41029
.58	0.47959	0.47119	0.46279	0.45440	0.44601	0.43763	0.42926	0.42090	0.41256	0.40423	0.39592
.59	0.46337	0.45517	0.44697	0.43878	0.43059	0.42241	0.41424	0.40608	0.39794	0.38981	0.38170
.60	0.44730	0.43930	0.43130	0.42330	0.41532	0.40734	0.39937	0.39141	0.38347	0.37554	0.36763
.61	0.43137	0.42357	0.41577	0.40798	0.40019	0.39241	0.38464	0.37689	0.36914	0.36141	0.35370
.62	0.41560	0.40800	0.40040	0.39281	0.38522	0.37764	0.37007	0.36251	0.35497	0.34744	0.33993
.63	0.39999	0.39259	0.38519	0.37780	0.37041	0.36303	0.35566	0.34830	0.34096	0.33363	0.32632
.64	0.38454	0.37734	0.37014	0.36295	0.35576	0.34858	0.34141	0.33425	0.32711	0.31998	0.31287
.65	0.36925	0.36225	0.35526	0.34826	0.34128	0.33430	0.32733	0.32037	0.31343	0.30650	0.29959
.66	0.35414	0.34734	0.34054	0.33375	0.32696	0.32018	0.31341	0.30666	0.29991	0.29319	0.28648
.67	0.33921	0.33261	0.32601	0.31941	0.31283	0.30625	0.29968	0.29312	0.28658	0.28005	0.27354
.68	0.32445	0.31805	0.31165	0.30526	0.29887	0.29249	0.28612	0.27976	0.27342	0.26709	0.26078
.69	0.30988	0.30368	0.29748	0.29129	0.28510	0.27892	0.27275	0.26659	0.26045	0.25432	0.24821
.70	0.29550	0.28950	0.28350	0.27751	0.27152	0.26554	0.25957	0.25361	0.24767	0.24174	0.23583
.71	0.28131	0.27552	0.26972	0.26392	0.25814	0.25236	0.24659	0.24083	0.23509	0.22936	0.22365
.72	0.26733	0.26173	0.25614	0.25054	0.24495	0.23937	0.23380	0.22825	0.22270	0.21718	0.21167
.73	0.25356	0.24816	0.24276	0.23737	0.23198	0.22660	0.22123	0.21587	0.21053	0.20520	0.19989
.74	0.24000	0.23480	0.22960	0.22441	0.21922	0.21404	0.20887	0.20371	0.19857	0.19344	0.18833
.75	0.22666	0.22166	0.21666	0.21166	0.20668	0.20170	0.19673	0.19177	0.18683	0.18190	0.17699
.76	0.21354	0.20874	0.20394	0.19915	0.19436	0.18958	0.18481	0.18006	0.17531	0.17058	0.16588
.77	0.20066	0.19606	0.19146	0.18687	0.18228	0.17770	0.17313	0.16858	0.16403	0.15950	0.15500
.78	0.18802	0.18362	0.17923	0.17483	0.17044	0.16606	0.16169	0.15734	0.15299	0.14867	0.14436
.79	0.17563	0.17143	0.16724	0.16304	0.15885	0.15467	0.15050	0.14635	0.14220	0.13808	0.13397
.80	0.16350	0.15950	0.15550	0.15151	0.14752	0.14354	0.13957	0.13562	0.13167	0.12774	0.12383
.81	0.15164	0.14784	0.14404	0.14025	0.13646	0.13268	0.12891	0.12515	0.12141	0.11768	0.11397
.82	0.14005	0.13645	0.13285	0.12926	0.12567	0.12209	0.11852	0.11496	0.11142	0.10789	0.10438
.83	0.12875	0.12535	0.12195	0.11855	0.11517	0.11179	0.10842	0.10506	0.10172	0.09839	0.09508
.84	0.11774	0.11454	0.11134	0.10815	0.10496	0.10178	0.09861	0.09545	0.09231	0.08918	0.08607
.85	0.10705	0.10405	0.10105	0.09805	0.09507	0.09209	0.08912	0.08616	0.08322	0.08029	0.07738
.86	0.09667	0.09387	0.09108	0.08828	0.08550	0.08272	0.07995	0.07719	0.07444	0.07172	0.06901
.87	0.08664	0.08404	0.08144	0.07885	0.07626	0.07368	0.07111	0.06855	0.06601	0.06348	0.06097
.88	0.07696	0.07456	0.07216	0.06977	0.06738	0.06500	0.06263	0.06027	0.05793	0.05560	0.05329
.89	0.06765	0.06545	0.06325	0.06106	0.05887	0.05669	0.05452	0.05236	0.05022	0.04809	0.04598
.90	0.05873	0.05673	0.05473	0.05273	0.05075	0.04877	0.04680	0.04484	0.04290	0.04097	0.03906
.91	0.05022	0.04842	0.04662	0.04483	0.04304	0.04126	0.03949	0.03773	0.03599	0.03426	0.03255
.92	0.04215	0.04055	0.03895	0.03736	0.03577	0.03419	0.03262	0.03107	0.02952	0.02799	0.02648
.93	0.03455	0.03315	0.03176	0.03036	0.02897	0.02759	0.02623	0.02487	0.02352	0.02220	0.02089
.94	0.02746	0.02626	0.02506	0.02387	0.02268	0.02150	0.02033	0.01918	0.01803	0.01691	0.01580
.95	0.02092	0.01992	0.01893	0.01793	0.01694	0.01596	0.01500	0.01404	0.01309	0.01217	0.01126
.96	0.01499	0.01419	0.01340	0.01260	0.01182	0.01104	0.01027	0.00951	0.00876	0.00804	0.00733
.97	0.00975	0.00915	0.00856	0.00796	0.00738	0.00680	0.00623	0.00567	0.00512	0.00460	0.00409
.98	0.00532	0.00492	0.00452	0.00413	0.00374	0.00336	0.00299	0.00263	0.00229	0.00196	0.00165
.99	0.00188	0.00168	0.00149	0.00129	0.00110	0.00092	0.00075	0.00060	0.00045	0.00033	0.00022
1.00	0.00000										

V	U 0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
.00	1.37113	1.35124	1.33137	1.31153	1.29171	1.27193	1.25217	1.23244	1.21275	1.19310	1.17348
.01	1.35313	1.33344	1.31377	1.29413	1.27451	1.25493	1.23537	1.21584	1.19635	1.17690	1.15748
.02	1.33513	1.31564	1.29618	1.27673	1.25732	1.23793	1.21857	1.19924	1.17995	1.16070	1.14148
.03	1.31714	1.29785	1.27858	1.25934	1.24012	1.22093	1.20178	1.18265	1.16356	1.14450	1.12549
.04	1.29915	1.28006	1.26099	1.24195	1.22294	1.20395	1.18499	1.16606	1.14717	1.12832	1.10950
.05	1.28117	1.26228	1.24342	1.22457	1.20576	1.18697	1.16821	1.14948	1.13079	1.11214	1.09352
.06	1.26320	1.24451	1.22585	1.20720	1.18859	1.17000	1.15144	1.13291	1.11442	1.09597	1.07755
.07	1.24524	1.22676	1.20829	1.18984	1.17143	1.15304	1.13468	1.11636	1.09806	1.07981	1.06159
.08	1.22730	1.20901	1.19074	1.17250	1.15428	1.13610	1.11794	1.09981	1.08172	1.06367	1.04565
.09	1.20937	1.19128	1.17322	1.15517	1.13716	1.11917	1.10121	1.08328	1.06539	1.04754	1.02972
.10	1.19146	1.17357	1.15571	1.13786	1.12005	1.10226	1.08450	1.06678	1.04908	1.03143	1.01381
.11	1.17357	1.15589	1.13822	1.12058	1.10296	1.08537	1.06781	1.05029	1.03279	1.01534	0.99792
.12	1.15571	1.13822	1.12075	1.10331	1.08589	1.06850	1.05114	1.03382	1.01653	0.99927	0.98206
.13	1.13786	1.12058	1.10331	1.08606	1.06885	1.05166	1.03450	1.01738	1.00028	0.98323	0.96621
.14	1.12005	1.10296	1.08589	1.06885	1.05183	1.03484	1.01788	1.00096	0.98407	0.96721	0.95040
.15	1.10226	1.08537	1.06850	1.05166	1.03484	1.01805	1.00130	0.98457	0.96788	0.95122	0.93461
.16	1.08450	1.06781	1.05114	1.03450	1.01788	1.00130	0.98474	0.96821	0.95172	0.93527	0.91885
.17	1.06678	1.05029	1.03382	1.01738	1.00096	0.98457	0.96821	0.95189	0.93559	0.91934	0.90312
.18	1.04908	1.03279	1.01653	1.00028	0.98407	0.96788	0.95172	0.93559	0.91950	0.90345	0.88743
.19	1.03143	1.01534	0.99927	0.98323	0.96721	0.95122	0.93527	0.91934	0.90345	0.88759	0.87178
.20	1.01381	0.99792	0.98206	0.96621	0.95040	0.93461	0.91885	0.90312	0.88743	0.87178	0.85616
.21	0.99624	0.98055	0.96488	0.94924	0.93362	0.91803	0.90247	0.88695	0.87146	0.85600	0.84059
.22	0.97871	0.96322	0.94775	0.93231	0.91689	0.90150	0.88614	0.87082	0.85553	0.84027	0.82505
.23	0.96122	0.94593	0.93066	0.91542	0.90020	0.88501	0.86986	0.85473	0.83964	0.82458	0.80957
.24	0.94378	0.92869	0.91362	0.89858	0.88356	0.86857	0.85362	0.83869	0.82380	0.80894	0.79413
.25	0.92639	0.91150	0.89663	0.88179	0.86697	0.85218	0.83743	0.82270	0.80801	0.79335	0.77874
.26	0.90905	0.89436	0.87969	0.86505	0.85043	0.83584	0.82129	0.80676	0.79227	0.77781	0.76340
.27	0.89176	0.87728	0.86281	0.84837	0.83395	0.81956	0.80520	0.79088	0.77658	0.76233	0.74811
.28	0.87454	0.86025	0.84598	0.83174	0.81752	0.80333	0.78917	0.77505	0.76096	0.74690	0.73289
.29	0.85737	0.84328	0.82921	0.81517	0.80115	0.78716	0.77320	0.75928	0.74539	0.73153	0.71771
.30	0.84026	0.82637	0.81250	0.79866	0.78484	0.77105	0.75729	0.74357	0.72988	0.71622	0.70260
.31	0.82321	0.80952	0.79585	0.78221	0.76859	0.75500	0.74145	0.72792	0.71443	0.70097	0.68756
.32	0.80623	0.79274	0.77927	0.76583	0.75241	0.73902	0.72566	0.71234	0.69905	0.68579	0.67258
.33	0.78931	0.77602	0.76276	0.74951	0.73630	0.72311	0.70995	0.69682	0.68373	0.67068	0.65766
.34	0.77247	0.75938	0.74631	0.73327	0.72025	0.70726	0.69431	0.68138	0.66849	0.65563	0.64282
.35	0.75570	0.74281	0.72994	0.71710	0.70428	0.69149	0.67873	0.66601	0.65332	0.64066	0.62805
.36	0.73900	0.72631	0.71364	0.70100	0.68838	0.67579	0.66324	0.65071	0.63822	0.62576	0.61335
.37	0.72238	0.70989	0.69742	0.68498	0.67256	0.66017	0.64782	0.63549	0.62320	0.61094	0.59873
.38	0.70584	0.69355	0.68128	0.66904	0.65682	0.64463	0.63248	0.62035	0.60826	0.59620	0.58419
.39	0.68938	0.67729	0.66522	0.65318	0.64116	0.62918	0.61722	0.60529	0.59340	0.58155	0.56973
.40	0.67301	0.66112	0.64925	0.63741	0.62559	0.61380	0.60204	0.59032	0.57863	0.56697	0.55536
.41	0.65672	0.64503	0.63336	0.62172	0.61010	0.59852	0.58696	0.57543	0.56394	0.55249	0.54107
.42	0.64052	0.62904	0.61757	0.60613	0.59471	0.58332	0.57196	0.56064	0.54934	0.53809	0.52687
.43	0.62442	0.61313	0.60186	0.59062	0.57940	0.56822	0.55706	0.54593	0.53484	0.52379	0.51277
.44	0.60841	0.59732	0.58626	0.57521	0.56420	0.55321	0.54225	0.53132	0.52043	0.50958	0.49876
.45	0.59250	0.58161	0.57075	0.55990	0.54909	0.53830	0.52754	0.51681	0.50612	0.49547	0.48485
.46	0.57669	0.56600	0.55534	0.54469	0.53408	0.52349	0.51293	0.50240	0.49191	0.48146	0.47104
.47	0.56099	0.55050	0.54003	0.52959	0.51917	0.50878	0.49842	0.48810	0.47781	0.46755	0.45734
.48	0.54539	0.53510	0.52483	0.51459	0.50437	0.49418	0.48402	0.47390	0.46381	0.45375	0.44374
.49	0.52990	0.51981	0.50974	0.49970	0.48968	0.47969	0.46973	0.45981	0.44992	0.44006	0.43025
.50	0.51452	0.50463	0.49476	0.48492	0.47510	0.46531	0.45556	0.44583	0.43614	0.42648	0.41687

V	U 0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.
.50	0.51452	0.50463	0.49476	0.48492	0.47510	0.46531	0.45556	0.44583	0.43614	0.42648	0.4...
.51	0.49926	0.48957	0.47990	0.47026	0.46064	0.45105	0.44149	0.43197	0.42248	0.41302	0.4...
.52	0.48411	0.47462	0.46516	0.45571	0.44630	0.43691	0.42755	0.41822	0.40893	0.39968	0.3900..
.53	0.46909	0.45980	0.45053	0.44129	0.43207	0.42289	0.41373	0.40460	0.39551	0.38646	0.3...
.54	0.45419	0.44510	0.43604	0.42699	0.41798	0.40899	0.40003	0.39110	0.38221	0.37330	0.3...
.55	0.43943	0.43054	0.42167	0.41283	0.40401	0.39522	0.38646	0.37774	0.36905	0.36039	0.1...
.56	0.42479	0.41610	0.40743	0.39879	0.39017	0.38158	0.37303	0.36450	0.35601	0.34755	0.33914
.57	0.41029	0.40180	0.39333	0.38489	0.37647	0.36808	0.35972	0.35140	0.34311	0.33485	0.32664
.58	0.39592	0.38763	0.37937	0.37112	0.36291	0.35472	0.34656	0.33843	0.33034	0.32229	0.31427
.59	0.38170	0.37361	0.36555	0.35750	0.34949	0.34150	0.33354	0.32561	0.31772	0.30987	0.30205
.60	0.36763	0.35974	0.35187	0.34403	0.33621	0.32842	0.32067	0.31294	0.30525	0.29759	0.28998
.61	0.35370	0.34602	0.33835	0.33071	0.32309	0.31550	0.30794	0.30042	0.29292	0.28547	0.27805
.62	0.33993	0.33244	0.32498	0.31753	0.31012	0.30273	0.29537	0.28805	0.28075	0.27350	0.26628
.63	0.32632	0.31903	0.31177	0.30452	0.29731	0.29012	0.28296	0.27583	0.26874	0.26169	0.25467
.64	0.31287	0.30578	0.29872	0.29167	0.28466	0.27767	0.27071	0.26378	0.25689	0.25004	0.24322
.65	0.29959	0.29270	0.28583	0.27899	0.27217	0.26538	0.25863	0.25190	0.24521	0.23855	0.23194
.66	0.28648	0.27979	0.27312	0.26648	0.25986	0.25327	0.24671	0.24019	0.23370	0.22724	0.22083
.67	0.27354	0.26705	0.26058	0.25414	0.24772	0.24133	0.23498	0.22865	0.22236	0.21610	0.20989
.68	0.26078	0.25449	0.24823	0.24198	0.23577	0.22958	0.22342	0.21729	0.21120	0.20515	0.19913
.69	0.24821	0.24212	0.23606	0.23001	0.22400	0.21801	0.21205	0.20612	0.20023	0.19438	0.18856
.70	0.23583	0.22994	0.22408	0.21823	0.21242	0.20663	0.20087	0.19514	0.18945	0.18380	0.17818
.71	0.22365	0.21796	0.21229	0.20665	0.20103	0.19544	0.18989	0.18436	0.17887	0.17341	0.16800
.72	0.21167	0.20618	0.20071	0.19527	0.18985	0.18446	0.17910	0.17378	0.16849	0.16323	0.15802
.73	0.19989	0.19460	0.18934	0.18409	0.17888	0.17369	0.16853	0.16340	0.15831	0.15326	0.14824
.74	0.18833	0.18324	0.17817	0.17313	0.16811	0.16313	0.15817	0.15324	0.14835	0.14350	0.13868
.75	0.17699	0.17210	0.16723	0.16239	0.15757	0.15278	0.14803	0.14330	0.13861	0.13395	0.12934
.76	0.16588	0.16119	0.15652	0.15188	0.14726	0.14267	0.13811	0.13359	0.12910	0.12464	0.12022
.77	0.15500	0.15051	0.14604	0.14160	0.13718	0.13279	0.12843	0.12411	0.11981	0.11556	0.11134
.78	0.14436	0.14007	0.13580	0.13156	0.12734	0.12315	0.11899	0.11487	0.11078	0.10672	0.10271
.79	0.13397	0.12988	0.12581	0.12177	0.11775	0.11376	0.10980	0.10588	0.10199	0.09813	0.09432
.80	0.12383	0.11995	0.11608	0.11224	0.10842	0.10463	0.10087	0.09715	0.09345	0.08980	0.08618
.81	0.11397	0.11028	0.10661	0.10297	0.09935	0.09576	0.09221	0.08868	0.08519	0.08173	0.07832
.82	0.10438	0.10089	0.09742	0.09398	0.09056	0.08718	0.08382	0.08049	0.07720	0.07395	0.07073
.83	0.09508	0.09179	0.08852	0.08528	0.08206	0.07887	0.07572	0.07259	0.06950	0.06644	0.06343
.84	0.08607	0.08299	0.07992	0.07687	0.07386	0.07087	0.06791	0.06499	0.06209	0.05924	0.05642
.85	0.07738	0.07449	0.07162	0.06878	0.06596	0.06317	0.06042	0.05769	0.05500	0.05234	0.04973
.86	0.06901	0.06632	0.06365	0.06101	0.05839	0.05580	0.05324	0.05072	0.04823	0.04577	0.04336
.87	0.06097	0.05848	0.05602	0.05357	0.05116	0.04877	0.04641	0.04408	0.04179	0.03954	0.03732
.88	0.05329	0.05100	0.04873	0.04649	0.04427	0.04209	0.03993	0.03780	0.03571	0.03366	0.03164
.89	0.04598	0.04389	0.04182	0.03978	0.03776	0.03578	0.03382	0.03189	0.03000	0.02815	0.02633
.90	0.03906	0.03717	0.03530	0.03346	0.03164	0.02985	0.02810	0.02637	0.02468	0.02302	0.02141
.91	0.03255	0.03086	0.02920	0.02755	0.02594	0.02435	0.02279	0.02126	0.01977	0.01832	0.01690
.92	0.02648	0.02500	0.02353	0.02209	0.02067	0.01928	0.01792	0.01660	0.01530	0.01405	0.01283
.93	0.02089	0.01960	0.01833	0.01709	0.01587	0.01468	0.01352	0.01240	0.01131	0.01025	0.00924
.94	0.01580	0.01471	0.01364	0.01260	0.01158	0.01059	0.00963	0.00871	0.00782	0.00696	0.00614
.95	0.01126	0.01037	0.00950	0.00866	0.00784	0.00705	0.00629	0.00557	0.00488	0.00422	0.00361
.96	0.00733	0.00664	0.00597	0.00533	0.00471	0.00412	0.00356	0.00304	0.00255	0.00209	0.00168
.97	0.00409	0.00360	0.00313	0.00269	0.00227	0.00188	0.00152	0.00120	0.00091	0.00065	0.00044
.98	0.00165	0.00136	0.00109	0.00085	0.00063	0.00045	0.00029	0.00016	0.00007	0.00002	
.99	0.00022	0.00013	0.00006	0.00002	0.00000						

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V	U 0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
.00	1.17348	1.15390	1.13437	1.11488	1.09544	1.07605	1.05672	1.03743	1.01820	0.99903	0.97992
.01	1.15748	1.13810	1.11877	1.09949	1.08025	1.06105	1.04192	1.02283	1.00380	0.98483	0.96592
.02	1.14148	1.12231	1.10317	1.08409	1.06505	1.04606	1.02712	1.00823	0.98940	0.97063	0.95192
.03	1.12549	1.10651	1.08758	1.06869	1.04985	1.03106	1.01232	0.99364	0.97501	0.95644	0.93793
.04	1.10950	1.09073	1.07199	1.05331	1.03467	1.01608	0.99754	0.97905	0.96062	0.94225	0.92394
.05	1.09352	1.07495	1.05641	1.03793	1.01949	1.00110	0.98276	0.96447	0.94624	0.92807	0.90996
.06	1.07755	1.05918	1.04084	1.02256	1.00432	0.98613	0.96799	0.94990	0.93187	0.91390	0.89599
.07	1.06159	1.04342	1.02529	1.00720	0.98916	0.97117	0.95323	0.93535	0.91752	0.89975	0.88204
.08	1.04565	1.02767	1.00974	0.99186	0.97402	0.95623	0.93849	0.92080	0.90317	0.88560	0.86809
.09	1.02972	1.01195	0.99422	0.97653	0.95889	0.94130	0.92376	0.90627	0.88885	0.87148	0.85417
.10	1.01381	0.99624	0.97871	0.96122	0.94378	0.92639	0.90905	0.89176	0.87454	0.85737	0.84026
.11	0.99792	0.98055	0.96322	0.94593	0.92869	0.91150	0.89436	0.87728	0.86025	0.84328	0.82637
.12	0.98206	0.96488	0.94775	0.93066	0.91362	0.89663	0.87969	0.86281	0.84598	0.82921	0.81250
.13	0.96621	0.94924	0.93231	0.91542	0.89858	0.88179	0.86505	0.84837	0.83174	0.81517	0.79866
.14	0.95040	0.93362	0.91689	0.90020	0.88356	0.86697	0.85043	0.83395	0.81752	0.80115	0.78484
.15	0.93461	0.91803	0.90150	0.88501	0.86857	0.85218	0.83584	0.81956	0.80333	0.78716	0.77105
.16	0.91885	0.90247	0.88614	0.86986	0.85362	0.83743	0.82129	0.80520	0.78917	0.77320	0.75729
.17	0.90312	0.88695	0.87082	0.85473	0.83869	0.82270	0.80676	0.79088	0.77505	0.75928	0.74357
.18	0.88743	0.87146	0.85553	0.83964	0.82380	0.80801	0.79227	0.77658	0.76096	0.74539	0.72988
.19	0.87178	0.85600	0.84027	0.82458	0.80894	0.79335	0.77781	0.76233	0.74690	0.73153	0.71622
.20	0.85616	0.84059	0.82505	0.80957	0.79413	0.77874	0.76340	0.74811	0.73289	0.71771	0.70260
.21	0.84059	0.82521	0.80988	0.79459	0.77935	0.76416	0.74902	0.73394	0.71891	0.70394	0.68903
.22	0.82505	0.80988	0.79475	0.77966	0.76462	0.74963	0.73469	0.71981	0.70498	0.69021	0.67550
.23	0.80957	0.79459	0.77966	0.76477	0.74993	0.73514	0.72040	0.70572	0.69109	0.67652	0.66201
.24	0.79413	0.77935	0.76462	0.74993	0.73529	0.72070	0.70616	0.69168	0.67725	0.66288	0.64857
.25	0.77874	0.76416	0.74963	0.73514	0.72070	0.70631	0.69197	0.67769	0.66346	0.64929	0.63518
.26	0.76340	0.74902	0.73469	0.72040	0.70616	0.69197	0.67784	0.66375	0.64972	0.63575	0.62184
.27	0.74811	0.73394	0.71981	0.70572	0.69168	0.67769	0.66375	0.64987	0.63604	0.62227	0.60856
.28	0.73289	0.71891	0.70498	0.69109	0.67725	0.66346	0.64972	0.63604	0.62241	0.60884	0.59533
.29	0.71771	0.70394	0.69021	0.67652	0.66288	0.64929	0.63575	0.62227	0.60884	0.59547	0.58216
.30	0.70260	0.68903	0.67550	0.66201	0.64857	0.63518	0.62184	0.60856	0.59533	0.58216	0.56905
.31	0.68756	0.67418	0.66085	0.64756	0.63432	0.62113	0.60799	0.59491	0.58188	0.56891	0.55600
.32	0.67258	0.65940	0.64627	0.63318	0.62014	0.60715	0.59421	0.58133	0.56850	0.55573	0.54302
.33	0.65766	0.64469	0.63175	0.61887	0.60603	0.59324	0.58050	0.56781	0.55518	0.54261	0.53010
.34	0.64282	0.63004	0.61731	0.60462	0.59198	0.57939	0.56685	0.55437	0.54194	0.52957	0.51726
.35	0.62805	0.61547	0.60294	0.59045	0.57801	0.56562	0.55328	0.54100	0.52877	0.51660	0.50449
.36	0.61335	0.60097	0.58864	0.57635	0.56411	0.55192	0.53979	0.52770	0.51567	0.50370	0.49179
.37	0.59873	0.58655	0.57442	0.56233	0.55029	0.53830	0.52637	0.51448	0.50265	0.49088	0.47917
.38	0.58419	0.57221	0.56028	0.54839	0.53655	0.52476	0.51302	0.50134	0.48971	0.47814	0.46663
.39	0.56973	0.55795	0.54622	0.53454	0.52290	0.51131	0.49977	0.48828	0.47685	0.46548	0.45417
.40	0.55536	0.54378	0.53225	0.52076	0.50932	0.49793	0.48659	0.47531	0.46408	0.45291	0.44180
.41	0.54107	0.52969	0.51836	0.50708	0.49584	0.48465	0.47351	0.46242	0.45139	0.44042	0.42951
.42	0.52687	0.51570	0.50457	0.49348	0.48244	0.47145	0.46051	0.44963	0.43880	0.42803	0.41732
.43	0.51277	0.50179	0.49086	0.47998	0.46914	0.45835	0.44761	0.43692	0.42629	0.41572	0.40521
.44	0.49876	0.48799	0.47725	0.46657	0.45593	0.44534	0.43480	0.42431	0.41388	0.40351	0.39320
.45	0.48485	0.47428	0.46374	0.45326	0.44282	0.43243	0.42209	0.41180	0.40157	0.39140	0.38129
.46	0.47104	0.46067	0.45033	0.44005	0.42981	0.41962	0.40948	0.39939	0.38936	0.37939	0.36948
.47	0.45734	0.44716	0.43703	0.42694	0.41690	0.40691	0.39697	0.38709	0.37726	0.36749	0.35778
.48	0.44374	0.43376	0.42383	0.41394	0.40410	0.39431	0.38457	0.37489	0.36526	0.35569	0.34618
.49	0.43025	0.42047	0.41074	0.40105	0.39141	0.38182	0.37228	0.36280	0.35337	0.34400	0.33469
.50	0.41687	0.40729	0.39776	0.38827	0.37883	0.36944	0.36010	0.35082	0.34159	0.33242	0.32331

V	U 0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0
.50	0.41687	0.40729	0.39776	0.38827	0.37883	0.36944	0.36010	0.35082	0.34159	0.33242	0.3?...
.51	0.40361	0.39423	0.38490	0.37561	0.36637	0.35718	0.34804	0.33896	0.32993	0.32096	0.3?
.52	0.39046	0.38129	0.37215	0.36307	0.35403	0.34504	0.33610	0.32721	0.31838	0.30961	0.?
.53	0.37744	0.36846	0.35953	0.35065	0.34181	0.33302	0.32428	0.31559	0.30696	0.29839	0..
.54	0.36454	0.35577	0.34704	0.33835	0.32971	0.32112	0.31258	0.30409	0.29567	0.28730	0.??
.55	0.35177	0.34320	0.33467	0.32618	0.31774	0.30935	0.30101	0.29273	0.28450	0.27633	0.26822?
.56	0.33914	0.33076	0.32243	0.31414	0.30590	0.29771	0.28957	0.28149	0.27346	0.26549	0.25758
.57	0.32664	0.31846	0.31033	0.30224	0.29420	0.28621	0.27827	0.27039	0.26256	0.25479	0.24708
.58	0.31427	0.30630	0.29837	0.29048	0.28264	0.27485	0.26711	0.25942	0.25180	0.24423	0.?3670
.59	0.30205	0.29428	0.28655	0.27886	0.27122	0.26363	0.25609	0.24860	0.24118	0.23381	0.?265?
.60	0.28998	0.28240	0.27487	0.26738	0.25994	0.25255	0.24521	0.23793	0.23070	0.22353	0.21642
.61	0.27805	0.27068	0.26335	0.25606	0.24882	0.24163	0.23449	0.22741	0.22038	0.21341	0.20650
.62	0.26628	0.25911	0.25198	0.24489	0.23785	0.23086	0.22392	0.21704	0.21021	0.20344	0.19673
.63	0.25467	0.24770	0.24076	0.23388	0.22704	0.22025	0.21351	0.20682	0.20019	0.19362	0.18711
.64	0.24322	0.23645	0.22971	0.22303	0.21639	0.20980	0.20326	0.19677	0.19034	0.18397	0.17766
.65	0.23194	0.22536	0.21883	0.21234	0.20590	0.19951	0.19317	0.18689	0.18066	0.17449	0.16838
.66	0.22083	0.21445	0.20812	0.20183	0.19559	0.18940	0.18326	0.17718	0.17115	0.16518	0.15927
.67	0.20989	0.20371	0.19758	0.19149	0.18545	0.17946	0.17353	0.16764	0.16181	0.15604	0.15033
.68	0.19913	0.19316	0.18723	0.18134	0.17550	0.16971	0.16397	0.15828	0.15266	0.14708	0.14158
.69	0.18856	0.18279	0.17705	0.17137	0.16573	0.16014	0.15460	0.14911	0.14368	0.13831	0.13300
.70	0.17818	0.17261	0.16707	0.16159	0.15615	0.15076	0.14542	0.14013	0.13490	0.12973	0.12462
.71	0.16800	0.16262	0.15729	0.15200	0.14676	0.14157	0.13643	0.13135	0.12632	0.12135	0.11644
.72	0.15802	0.15284	0.14771	0.14262	0.13758	0.13259	0.12765	0.12277	0.11794	0.11317	0.10846
.73	0.14824	0.14327	0.13833	0.13345	0.12861	0.12382	0.11908	0.11439	0.10976	0.10519	0.10068
.74	0.13868	0.13390	0.12917	0.12449	0.11985	0.11526	0.11072	0.10623	0.10180	0.09743	0.09312
.75	0.12934	0.12476	0.12023	0.11574	0.11130	0.10691	0.10258	0.09829	0.09406	0.08989	0.08578
.76	0.12022	0.11585	0.11152	0.10723	0.10299	0.09880	0.09466	0.09058	0.08655	0.08258	0.07867
.77	0.11134	0.10717	0.10304	0.09895	0.09491	0.09092	0.08698	0.08310	0.07927	0.07550	0.07179
.78	0.10271	0.09873	0.09480	0.09091	0.08707	0.08328	0.07954	0.07586	0.07223	0.06866	0.06515
.79	0.09432	0.09054	0.08681	0.08312	0.07948	0.07589	0.07235	0.06887	0.06544	0.06207	0.05876
.80	0.08618	0.08261	0.07908	0.07559	0.07215	0.06876	0.06542	0.06214	0.05891	0.05574	0.05263
.81	0.07832	0.07494	0.07161	0.06832	0.06508	0.06189	0.05876	0.05567	0.05264	0.04967	0.04676
.82	0.07073	0.06755	0.06442	0.06134	0.05830	0.05531	0.05237	0.04948	0.04665	0.04388	0.04117
.83	0.06343	0.06045	0.05752	0.05463	0.05179	0.04900	0.04626	0.04358	0.04095	0.03838	0.03587
.84	0.05642	0.05365	0.05092	0.04823	0.04559	0.04300	0.04046	0.03798	0.03555	0.03318	0.03087
.85	0.04973	0.04715	0.04462	0.04213	0.03969	0.03730	0.03497	0.03268	0.03045	0.02828	0.02617
.86	0.04336	0.04098	0.03865	0.03636	0.03412	0.03193	0.02979	0.02771	0.02568	0.02371	0.02180
.87	0.03732	0.03515	0.03301	0.03093	0.02889	0.02690	0.02496	0.02307	0.02124	0.01947	0.01776
.88	0.03164	0.02967	0.02773	0.02585	0.02401	0.02222	0.02048	0.01879	0.01716	0.01559	0.01408
.89	0.02633	0.02455	0.02282	0.02113	0.01949	0.01790	0.01637	0.01488	0.01345	0.01208	0.01077
.90	0.02141	0.01983	0.01830	0.01681	0.01537	0.01398	0.01265	0.01136	0.01013	0.00896	0.00785
.91	0.01690	0.01553	0.01419	0.01291	0.01167	0.01048	0.00934	0.00825	0.00722	0.00625	0.00534
.92	0.01283	0.01166	0.01053	0.00944	0.00840	0.00741	0.00647	0.00559	0.00476	0.00399	0.00328
.93	0.00924	0.00826	0.00733	0.00644	0.00560	0.00481	0.00407	0.00339	0.00276	0.00219	0.00168
.94	0.00614	0.00537	0.00464	0.00395	0.00331	0.00272	0.00218	0.00170	0.00127	0.00090	0.00059
.95	0.00361	0.00303	0.00250	0.00201	0.00157	0.00118	0.00084	0.00056	0.00033	0.00016	0.00005
.96	0.00168	0.00130	0.00097	0.00068	0.00044	0.00025	0.00011	0.00003	0.00000		
.97	0.00044	0.00026	0.00013	0.00004	-0.00000						

V	U 0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
.00	0.97992	0.96087	0.94189	0.92298	0.90413	0.88536	0.86667	0.84805	0.82951	0.81105	0.79267
.01	0.96592	0.94708	0.92829	0.90958	0.89094	0.87236	0.85387	0.83545	0.81711	0.79885	0.78067
.02	0.95192	0.93328	0.91470	0.89618	0.87774	0.85937	0.84107	0.82285	0.80471	0.78665	0.76868
.03	0.93793	0.91948	0.90110	0.88279	0.86454	0.84637	0.82827	0.81025	0.79231	0.77446	0.75668
.04	0.92394	0.90570	0.88751	0.86940	0.85136	0.83338	0.81549	0.79767	0.77993	0.76227	0.74469
.05	0.90996	0.89192	0.87393	0.85602	0.83818	0.82040	0.80271	0.78509	0.76755	0.75009	0.73272
.06	0.89599	0.87815	0.86037	0.84265	0.82501	0.80743	0.78994	0.77252	0.75518	0.73792	0.72075
.07	0.88204	0.86439	0.84681	0.82929	0.81185	0.79448	0.77718	0.75996	0.74282	0.72576	0.70879
.08	0.86809	0.85065	0.83326	0.81595	0.79871	0.78153	0.76444	0.74742	0.73048	0.71362	0.69684
.09	0.85417	0.83692	0.81974	0.80262	0.78558	0.76861	0.75171	0.73489	0.71815	0.70149	0.68492
.10	0.84026	0.82321	0.80623	0.78931	0.77247	0.75570	0.73900	0.72238	0.70584	0.68938	0.67301
.11	0.82637	0.80952	0.79274	0.77602	0.75938	0.74281	0.72631	0.70989	0.69355	0.67729	0.66112
.12	0.81250	0.79585	0.77927	0.76276	0.74631	0.72994	0.71364	0.69742	0.68128	0.66522	0.64925
.13	0.79866	0.78221	0.76583	0.74951	0.73327	0.71710	0.70100	0.68498	0.66904	0.65318	0.63741
.14	0.78484	0.76859	0.75241	0.73630	0.72025	0.70428	0.68838	0.67256	0.65682	0.64116	0.62559
.15	0.77105	0.75500	0.73902	0.72311	0.70726	0.69149	0.67579	0.66017	0.64463	0.62918	0.61380
.16	0.75729	0.74145	0.72566	0.70995	0.69431	0.67873	0.66324	0.64782	0.63248	0.61722	0.60204
.17	0.74357	0.72792	0.71234	0.69682	0.68138	0.66601	0.65071	0.63549	0.62035	0.60529	0.59032
.18	0.72988	0.71443	0.69905	0.68373	0.66849	0.65332	0.63822	0.62320	0.60826	0.59340	0.57863
.19	0.71622	0.70097	0.68579	0.67068	0.65563	0.64066	0.62576	0.61094	0.59620	0.58155	0.56697
.20	0.70260	0.68756	0.67258	0.65766	0.64282	0.62805	0.61335	0.59873	0.58419	0.56973	0.55536
.21	0.68903	0.67418	0.65940	0.64469	0.63004	0.61547	0.60097	0.58655	0.57221	0.55795	0.54378
.22	0.67550	0.66085	0.64627	0.63175	0.61731	0.60294	0.58864	0.57442	0.56028	0.54622	0.53225
.23	0.66201	0.64756	0.63318	0.61887	0.60462	0.59045	0.57635	0.56233	0.54839	0.53454	0.52076
.24	0.64857	0.63432	0.62014	0.60603	0.59198	0.57801	0.56411	0.55029	0.53655	0.52290	0.50932
.25	0.63518	0.62113	0.60715	0.59324	0.57939	0.56562	0.55192	0.53830	0.52476	0.51131	0.49793
.26	0.62184	0.60799	0.59421	0.58050	0.56685	0.55328	0.53979	0.52637	0.51302	0.49977	0.48659
.27	0.60856	0.59491	0.58133	0.56781	0.55437	0.54100	0.52770	0.51448	0.50134	0.48828	0.47531
.28	0.59533	0.58188	0.56850	0.55518	0.54194	0.52877	0.51567	0.50265	0.48971	0.47685	0.46408
.29	0.58216	0.56891	0.55573	0.54261	0.52957	0.51660	0.50370	0.49088	0.47814	0.46548	0.45291
.30	0.56905	0.55600	0.54302	0.53010	0.51726	0.50449	0.49179	0.47917	0.46663	0.45417	0.44180
.31	0.55600	0.54315	0.53037	0.51766	0.50501	0.49244	0.47994	0.46752	0.45518	0.44293	0.43075
.32	0.54302	0.53037	0.51779	0.50528	0.49283	0.48046	0.46816	0.45594	0.44380	0.43174	0.41977
.33	0.53010	0.51766	0.50528	0.49296	0.48072	0.46855	0.45645	0.44443	0.43249	0.42063	0.40886
.34	0.51726	0.50501	0.49283	0.48072	0.46867	0.45670	0.44480	0.43298	0.42124	0.40959	0.39801
.35	0.50449	0.49244	0.48046	0.46855	0.45670	0.44493	0.43323	0.42161	0.41007	0.39861	0.38724
.36	0.49179	0.47994	0.46816	0.45645	0.44480	0.43323	0.42173	0.41031	0.39897	0.38772	0.37654
.37	0.47917	0.46752	0.45594	0.44443	0.43298	0.42161	0.41031	0.39909	0.38795	0.37690	0.36592
.38	0.46663	0.45518	0.44380	0.43249	0.42124	0.41007	0.39897	0.38795	0.37701	0.36616	0.35538
.39	0.45417	0.44293	0.43174	0.42063	0.40959	0.39861	0.38772	0.37690	0.36616	0.35550	0.34492
.40	0.44180	0.43075	0.41977	0.40886	0.39801	0.38724	0.37654	0.36592	0.35538	0.34492	0.33455
.41	0.42951	0.41867	0.40788	0.39717	0.38653	0.37595	0.36546	0.35504	0.34470	0.33444	0.32426
.42	0.41732	0.40667	0.39609	0.38557	0.37513	0.36476	0.35446	0.34424	0.33410	0.32404	0.31407
.43	0.40521	0.39477	0.38438	0.37407	0.36383	0.35365	0.34356	0.33354	0.32360	0.31374	0.30396
.44	0.39320	0.38296	0.37278	0.36266	0.35262	0.34265	0.33275	0.32293	0.31319	0.30353	0.29396
.45	0.38129	0.37125	0.36127	0.35135	0.34151	0.33173	0.32204	0.31242	0.30288	0.29342	0.28405
.46	0.36948	0.35964	0.34986	0.34014	0.33050	0.32092	0.31143	0.30201	0.29267	0.28341	0.27424
.47	0.35778	0.34813	0.33855	0.32904	0.31959	0.31022	0.30092	0.29170	0.28256	0.27350	0.26453
.48	0.34618	0.33673	0.32735	0.31804	0.30879	0.29962	0.29052	0.28150	0.27256	0.26370	0.25493
.49	0.33469	0.32544	0.31626	0.30715	0.29810	0.28913	0.28023	0.27141	0.26267	0.25401	0.24544
.50	0.32331	0.31426	0.30528	0.29637	0.28752	0.27875	0.27005	0.26143	0.25289	0.24444	0.23606

F(U,V)

V	U 0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
.50	0.32331	0.31426	0.30528	0.29637	0.28752	0.27875	0.27005	0.26143	0.25289	0.24444	0.23606
.51	0.31205	0.30320	0.29442	0.28571	0.27706	0.26849	0.25999	0.25157	0.24323	0.23497	0.22680
.52	0.30090	0.29226	0.28368	0.27516	0.26672	0.25835	0.25005	0.24183	0.23369	0.22563	0.21766
.53	0.28988	0.28144	0.27305	0.26474	0.25650	0.24832	0.24023	0.23221	0.22427	0.21641	0.20863
.54	0.27899	0.27074	0.26256	0.25444	0.24640	0.23843	0.23053	0.22271	0.21497	0.20731	0.19974
.55	0.26822	0.26017	0.25219	0.24427	0.23643	0.22866	0.22096	0.21334	0.20580	0.19834	0.19097
.56	0.25758	0.24973	0.24195	0.23424	0.22659	0.21902	0.21152	0.20410	0.19676	0.18951	0.18233
.57	0.24708	0.23943	0.23185	0.22434	0.21689	0.20952	0.20222	0.19500	0.18786	0.18080	0.17383
.58	0.23672	0.22927	0.22189	0.21457	0.20733	0.20016	0.19306	0.18604	0.17910	0.17224	0.16547
.59	0.22650	0.21925	0.21207	0.20495	0.19791	0.19094	0.18404	0.17722	0.17048	0.16382	0.15725
.60	0.21642	0.20937	0.20239	0.19548	0.18863	0.18186	0.17516	0.16854	0.16200	0.15555	0.14917
.61	0.20650	0.19965	0.19287	0.18615	0.17951	0.17294	0.16644	0.16002	0.15368	0.14742	0.14125
.62	0.19673	0.19008	0.18350	0.17698	0.17054	0.16417	0.15787	0.15165	0.14551	0.13945	0.13348
.63	0.18711	0.18067	0.17429	0.16797	0.16173	0.15555	0.14946	0.14344	0.13750	0.13164	0.12587
.64	0.17766	0.17142	0.16524	0.15912	0.15308	0.14710	0.14121	0.13539	0.12965	0.12399	0.11842
.65	0.16838	0.16233	0.15635	0.15044	0.14459	0.13882	0.13312	0.12750	0.12196	0.11651	0.11113
.66	0.15927	0.15342	0.14764	0.14192	0.13628	0.13071	0.12521	0.11979	0.11445	0.10919	0.10402
.67	0.15033	0.14468	0.13910	0.13359	0.12814	0.12277	0.11747	0.11225	0.10711	0.10206	0.09708
.68	0.14158	0.13613	0.13075	0.12543	0.12019	0.11502	0.10992	0.10490	0.09996	0.09510	0.09033
.69	0.13300	0.12776	0.12258	0.11746	0.11242	0.10745	0.10255	0.09773	0.09299	0.08833	0.08376
.70	0.12462	0.11958	0.11460	0.10968	0.10484	0.10007	0.09537	0.09075	0.08621	0.08175	0.07738
.71	0.11644	0.11159	0.10681	0.10210	0.09745	0.09288	0.08838	0.08396	0.07962	0.07537	0.07119
.72	0.10846	0.10381	0.09923	0.09472	0.09027	0.08590	0.08160	0.07738	0.07324	0.06918	0.06521
.73	0.10068	0.09624	0.09185	0.08754	0.08330	0.07912	0.07503	0.07101	0.06707	0.06321	0.05944
.74	0.09312	0.08888	0.08469	0.08058	0.07654	0.07256	0.06867	0.06485	0.06111	0.05745	0.05387
.75	0.08578	0.08173	0.07775	0.07384	0.06999	0.06622	0.06253	0.05891	0.05536	0.05191	0.04853
.76	0.07867	0.07482	0.07104	0.06732	0.06368	0.06011	0.05661	0.05319	0.04985	0.04659	0.04342
.77	0.07179	0.06814	0.06456	0.06104	0.05760	0.05423	0.05093	0.04771	0.04457	0.04151	0.03854
.78	0.06515	0.06170	0.05832	0.05501	0.05176	0.04859	0.04549	0.04247	0.03953	0.03667	0.03390
.79	0.05876	0.05551	0.05233	0.04922	0.04617	0.04320	0.04030	0.03748	0.03474	0.03208	0.02951
.80	0.05263	0.04958	0.04660	0.04368	0.04084	0.03807	0.03537	0.03275	0.03021	0.02775	0.02538
.81	0.04676	0.04391	0.04113	0.03842	0.03577	0.03320	0.03071	0.02829	0.02594	0.02369	0.02151
.82	0.04117	0.03853	0.03594	0.03343	0.03099	0.02861	0.02632	0.02410	0.02196	0.01990	0.01792
.83	0.03587	0.03342	0.03104	0.02873	0.02648	0.02431	0.02221	0.02019	0.01825	0.01640	0.01462
.84	0.03087	0.02862	0.02644	0.02432	0.02228	0.02031	0.01841	0.01659	0.01485	0.01319	0.01162
.85	0.02617	0.02412	0.02214	0.02023	0.01838	0.01661	0.01492	0.01329	0.01175	0.01030	0.00892
.86	0.02180	0.01995	0.01817	0.01646	0.01481	0.01324	0.01174	0.01032	0.00898	0.00772	0.00655
.87	0.01776	0.01612	0.01454	0.01302	0.01158	0.01021	0.00891	0.00769	0.00655	0.00549	0.00452
.88	0.01408	0.01264	0.01125	0.00994	0.00870	0.00752	0.00643	0.00541	0.00447	0.00361	0.00283
.89	0.01077	0.00952	0.00834	0.00723	0.00618	0.00521	0.00432	0.00350	0.00276	0.00210	0.00152
.90	0.00785	0.00680	0.00582	0.00491	0.00406	0.00329	0.00260	0.00198	0.00143	0.00098	0.00060
.91	0.00534	0.00450	0.00372	0.00300	0.00236	0.00179	0.00129	0.00087	0.00053	0.00027	0.00010
.92	0.00328	0.00263	0.00205	0.00153	0.00109	0.00072	0.00042	0.00020	0.00006	0.00000	
.93	0.00168	0.00123	0.00085	0.00054	0.00029	0.00012	0.00002				
.94	0.00059	0.00034	0.00016	0.00004	0.00000						
.95	0.00005	0.00000									

$$F(U,V)$$

U=.40-.50
V=.00-.45

U	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
V											
.00	0.79267	0.77439	0.75619	0.73809	0.72008	0.70217	0.68436	0.66665	0.64905	0.63156	0.61418
.01	0.78067	0.76259	0.74459	0.72669	0.70888	0.69117	0.67356	0.65605	0.63865	0.62136	0.60419
.02	0.76868	0.75079	0.73299	0.71529	0.69768	0.68017	0.66276	0.64546	0.62826	0.61117	0.59419
.03	0.75668	0.73900	0.72140	0.70390	0.68649	0.66918	0.65197	0.63486	0.61786	0.60097	0.58419
.04	0.74469	0.72721	0.70981	0.69251	0.67530	0.65819	0.64118	0.62427	0.60747	0.59078	0.57421
.05	0.73272	0.71543	0.69823	0.68113	0.66412	0.64721	0.63040	0.61369	0.59709	0.58060	0.56423
.06	0.72075	0.70366	0.68666	0.66976	0.65295	0.63624	0.61963	0.60312	0.58672	0.57043	0.55426
.07	0.70879	0.69190	0.67511	0.65840	0.64179	0.62528	0.60887	0.59257	0.57637	0.56028	0.54430
.08	0.69684	0.68016	0.66356	0.64706	0.63065	0.61434	0.59813	0.58202	0.56602	0.55013	0.53436
.09	0.68492	0.66843	0.65203	0.63573	0.61952	0.60341	0.58740	0.57150	0.55570	0.54001	0.52443
.10	0.67301	0.65672	0.64052	0.62442	0.60841	0.59250	0.57669	0.56099	0.54539	0.52990	0.51452
.11	0.66112	0.64503	0.62904	0.61313	0.59732	0.58161	0.56600	0.55050	0.53510	0.51981	0.50463
.12	0.64925	0.63336	0.61757	0.60186	0.58626	0.57075	0.55534	0.54003	0.52483	0.50974	0.49476
.13	0.63741	0.62172	0.60613	0.59062	0.57521	0.55990	0.54469	0.52959	0.51459	0.49970	0.48492
.14	0.62559	0.61010	0.59471	0.57940	0.56420	0.54909	0.53408	0.51917	0.50437	0.48968	0.47510
.15	0.61380	0.59852	0.58332	0.56822	0.55321	0.53830	0.52349	0.50878	0.49418	0.47969	0.46531
.16	0.60204	0.58696	0.57196	0.55706	0.54225	0.52754	0.51293	0.49842	0.48402	0.46973	0.45556
.17	0.59032	0.57543	0.56064	0.54593	0.53132	0.51681	0.50240	0.48810	0.47390	0.45981	0.44583
.18	0.57863	0.56394	0.54934	0.53484	0.52043	0.50612	0.49191	0.47781	0.46381	0.44992	0.43614
.19	0.56697	0.55249	0.53809	0.52379	0.50958	0.49547	0.48146	0.46755	0.45375	0.44006	0.42648
.20	0.55536	0.54107	0.52687	0.51277	0.49876	0.48485	0.47104	0.45734	0.44374	0.43025	0.41687
.21	0.54378	0.52969	0.51570	0.50179	0.48799	0.47428	0.46067	0.44716	0.43376	0.42047	0.40729
.22	0.53225	0.51836	0.50457	0.49086	0.47725	0.46374	0.45033	0.43703	0.42383	0.41074	0.39776
.23	0.52076	0.50708	0.49348	0.47998	0.46657	0.45326	0.44005	0.42694	0.41394	0.40105	0.38827
.24	0.50932	0.49584	0.48244	0.46914	0.45593	0.44282	0.42981	0.41690	0.40410	0.39141	0.37883
.25	0.49793	0.48465	0.47145	0.45835	0.44534	0.43243	0.41962	0.40691	0.39431	0.38182	0.36944
.26	0.48659	0.47351	0.46051	0.44761	0.43480	0.42209	0.40948	0.39697	0.38457	0.37228	0.36010
.27	0.47531	0.46242	0.44963	0.43692	0.42431	0.41180	0.39939	0.38709	0.37489	0.36280	0.35082
.28	0.46408	0.45139	0.43880	0.42629	0.41388	0.40157	0.38936	0.37726	0.36526	0.35337	0.34159
.29	0.45291	0.44042	0.42803	0.41572	0.40351	0.39140	0.37939	0.36749	0.35569	0.34400	0.33242
.30	0.44180	0.42951	0.41732	0.40521	0.39320	0.38129	0.36948	0.35778	0.34618	0.33469	0.32331
.31	0.43075	0.41867	0.40667	0.39477	0.38296	0.37125	0.35964	0.34813	0.33673	0.32544	0.31426
.32	0.41977	0.40788	0.39609	0.38438	0.37278	0.36127	0.34986	0.33855	0.32735	0.31626	0.30528
.33	0.40886	0.39717	0.38557	0.37407	0.36266	0.35135	0.34014	0.32904	0.31804	0.30715	0.29637
.34	0.39801	0.38653	0.37513	0.36383	0.35262	0.34151	0.33050	0.31959	0.30879	0.29810	0.28752
.35	0.38724	0.37595	0.36476	0.35365	0.34265	0.33173	0.32092	0.31022	0.29962	0.28913	0.27875
.36	0.37654	0.36546	0.35446	0.34356	0.33275	0.32204	0.31143	0.30092	0.29052	0.28023	0.27005
.37	0.36592	0.35504	0.34424	0.33354	0.32293	0.31242	0.30201	0.29170	0.28150	0.27141	0.26143
.38	0.35538	0.34470	0.33410	0.32360	0.31319	0.30288	0.29267	0.28256	0.27256	0.26267	0.25289
.39	0.34492	0.33444	0.32404	0.31374	0.30353	0.29342	0.28341	0.27350	0.26370	0.25401	0.24444
.40	0.33455	0.32426	0.31407	0.30396	0.29396	0.28405	0.27424	0.26453	0.25493	0.24544	0.23606
.41	0.32426	0.31418	0.30418	0.29428	0.28447	0.27476	0.26515	0.25564	0.24624	0.23695	0.22778
.42	0.31407	0.30418	0.29439	0.28468	0.27507	0.26556	0.25615	0.24685	0.23765	0.22856	0.21958
.43	0.30396	0.29428	0.28468	0.27518	0.26577	0.25646	0.24725	0.23814	0.22914	0.22025	0.21148
.44	0.29396	0.28447	0.27507	0.26577	0.25656	0.24745	0.23844	0.22953	0.22074	0.21204	0.20347
.45	0.28405	0.27476	0.26556	0.25646	0.24745	0.23854	0.22973	0.22102	0.21242	0.20393	0.19556

$$F(U,V)$$

V	U 0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
.45	0.28405	0.27476	0.26556	0.25646	0.24745	0.23854	0.22973	0.22102	0.21242	0.20393	0.19556
.46	0.27424	0.26515	0.25615	0.24725	0.23844	0.22973	0.22112	0.21261	0.20421	0.19592	0.18775
.47	0.26453	0.25564	0.24685	0.23814	0.22953	0.22102	0.21261	0.20431	0.19611	0.18802	0.18004
.48	0.25493	0.24624	0.23765	0.22914	0.22074	0.21242	0.20421	0.19611	0.18811	0.18022	0.17244
.49	0.24544	0.23695	0.22856	0.22025	0.21204	0.20393	0.19592	0.18802	0.18022	0.17253	0.16495
.50	0.23606	0.22778	0.21958	0.21148	0.20347	0.19556	0.18775	0.18004	0.17244	0.16495	0.15757
.51	0.22680	0.21871	0.21072	0.20281	0.19500	0.18729	0.17968	0.17218	0.16478	0.15749	0.15031
.52	0.21766	0.20977	0.20197	0.19427	0.18666	0.17915	0.17174	0.16443	0.15724	0.15015	0.14317
.53	0.20863	0.20095	0.19335	0.18585	0.17844	0.17113	0.16392	0.15681	0.14981	0.14292	0.13615
.54	0.19974	0.19225	0.18485	0.17755	0.17034	0.16323	0.15622	0.14932	0.14252	0.13583	0.12925
.55	0.19097	0.18368	0.17649	0.16938	0.16237	0.15546	0.14865	0.14195	0.13535	0.12886	0.12248
.56	0.18233	0.17525	0.16825	0.16135	0.15454	0.14783	0.14122	0.13471	0.12831	0.12202	0.11584
.57	0.17383	0.16694	0.16015	0.15344	0.14684	0.14032	0.13392	0.12761	0.12141	0.11532	0.10934
.58	0.16547	0.15878	0.15218	0.14568	0.13927	0.13296	0.12675	0.12065	0.11465	0.10876	0.10298
.59	0.15725	0.15076	0.14436	0.13806	0.13185	0.12574	0.11973	0.11383	0.10803	0.10234	0.09676
.60	0.14917	0.14289	0.13669	0.13059	0.12458	0.11867	0.11286	0.10715	0.10155	0.09606	0.09068
.61	0.14125	0.13516	0.12917	0.12326	0.11745	0.11174	0.10613	0.10063	0.09523	0.08994	0.08476
.62	0.13348	0.12759	0.12180	0.11609	0.11048	0.10497	0.09956	0.09426	0.08906	0.08397	0.07899
.63	0.12587	0.12018	0.11458	0.10908	0.10367	0.09836	0.09315	0.08804	0.08304	0.07815	0.07338
.64	0.11842	0.11293	0.10753	0.10223	0.09702	0.09191	0.08690	0.08199	0.07719	0.07250	0.06793
.65	0.11113	0.10585	0.10065	0.09555	0.09054	0.08563	0.08082	0.07611	0.07151	0.06702	0.06264
.66	0.10402	0.09893	0.09394	0.08903	0.08422	0.07951	0.07490	0.07040	0.06600	0.06171	0.05753
.67	0.09708	0.09220	0.08740	0.08270	0.07809	0.07358	0.06917	0.06486	0.06066	0.05657	0.05259
.68	0.09033	0.08564	0.08104	0.07654	0.07213	0.06782	0.06361	0.05951	0.05551	0.05162	0.04784
.69	0.08376	0.07927	0.07487	0.07057	0.06636	0.06225	0.05824	0.05433	0.05054	0.04685	0.04327
.70	0.07738	0.07309	0.06889	0.06479	0.06078	0.05687	0.05306	0.04935	0.04576	0.04227	0.03889
.71	0.07119	0.06711	0.06311	0.05921	0.05540	0.05169	0.04808	0.04457	0.04117	0.03788	0.03470
.72	0.06521	0.06132	0.05753	0.05382	0.05021	0.04670	0.04329	0.03999	0.03679	0.03370	0.03072
.73	0.05944	0.05575	0.05215	0.04865	0.04524	0.04193	0.03872	0.03561	0.03261	0.02972	0.02695
.74	0.05387	0.05039	0.04699	0.04369	0.04048	0.03737	0.03436	0.03145	0.02865	0.02596	0.02339
.75	0.04853	0.04525	0.04205	0.03895	0.03594	0.03303	0.03022	0.02751	0.02491	0.02242	0.02004
.76	0.04342	0.04033	0.03734	0.03443	0.03162	0.02891	0.02630	0.02380	0.02140	0.01911	0.01693
.77	0.03854	0.03565	0.03286	0.03015	0.02754	0.02503	0.02262	0.02032	0.01812	0.01603	0.01405
.78	0.03390	0.03121	0.02862	0.02611	0.02370	0.02139	0.01918	0.01708	0.01508	0.01319	0.01141
.79	0.02951	0.02702	0.02463	0.02232	0.02012	0.01800	0.01600	0.01409	0.01229	0.01060	0.00902
.80	-0.02538	0.02309	0.02090	0.01879	0.01678	0.01487	0.01306	0.01136	0.00976	0.00827	0.00689
.81	0.02151	0.01943	0.01743	0.01553	0.01372	0.01201	0.01040	0.00889	0.00749	0.00620	0.00502
.82	0.01792	0.01604	0.01424	0.01254	0.01093	0.00942	0.00801	0.00670	0.00550	0.00441	0.00344
.83	0.01462	0.01294	0.01134	0.00984	0.00843	0.00712	0.00591	0.00480	0.00380	0.00291	0.00213
.84	0.01162	0.01013	0.00874	0.00743	0.00622	0.00511	0.00410	0.00320	0.00240	0.00171	0.00113
.85	0.00892	0.00764	0.00644	0.00534	0.00433	0.00342	0.00261	0.00190	0.00130	0.00081	0.00043
.86	0.00655	0.00546	0.00447	0.00356	0.00276	0.00205	0.00144	0.00093	0.00053	0.00024	0.00006
.87	0.00452	0.00363	0.00283	0.00213	0.00152	0.00101	0.00060	0.00030	0.00010	0.00001	
.88	0.00283	0.00215	0.00155	0.00105	0.00064	0.00033	0.00012	0.00001			
.89	0.00152	0.00104	0.00064	0.00034	0.00013	0.00002					
.90	0.00060	0.00032	0.00012	0.00002							
.91	0.00010	0.00001									

V	U 0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
.00	0.61418	0.59692	0.57978	0.56276	0.54586	0.52909	0.51245	0.49595	0.47959	0.46337	0.44730
.01	0.60419	0.58712	0.57018	0.55336	0.53666	0.52009	0.50366	0.48735	0.47119	0.45517	0.43930
.02	0.59419	0.57733	0.56058	0.54396	0.52746	0.51109	0.49486	0.47876	0.46279	0.44697	0.43130
.03	0.58419	0.56753	0.55099	0.53457	0.51827	0.50210	0.48606	0.47016	0.45440	0.43878	0.42330
.04	0.57421	0.55774	0.54140	0.52518	0.50908	0.49311	0.47728	0.46157	0.44601	0.43059	0.41532
.05	0.56423	0.54796	0.53182	0.51580	0.49990	0.48413	0.46850	0.45299	0.43763	0.42241	0.40734
.06	0.55426	0.53819	0.52225	0.50643	0.49073	0.47516	0.45973	0.44443	0.42926	0.41424	0.39937
.07	0.54430	0.52844	0.51269	0.49707	0.48157	0.46621	0.45097	0.43587	0.42090	0.40608	0.39141
.08	0.53436	0.51869	0.50315	0.48773	0.47243	0.45726	0.44223	0.42732	0.41256	0.39794	0.38347
.09	0.52443	0.50897	0.49362	0.47840	0.46330	0.44833	0.43350	0.41880	0.40423	0.38981	0.37554
.10	0.51452	0.49926	0.48411	0.46909	0.45419	0.43943	0.42479	0.41029	0.39592	0.38170	0.36763
.11	0.50463	0.48957	0.47462	0.45980	0.44510	0.43054	0.41610	0.40180	0.38763	0.37361	0.35974
.12	0.49476	0.47990	0.46516	0.45053	0.43604	0.42167	0.40743	0.39333	0.37937	0.36555	0.35187
.13	0.48492	0.47026	0.45571	0.44129	0.42699	0.41283	0.39879	0.38489	0.37112	0.35750	0.34403
.14	0.47510	0.46064	0.44630	0.43207	0.41798	0.40401	0.39017	0.37647	0.36291	0.34949	0.33621
.15	0.46531	0.45105	0.43691	0.42289	0.40899	0.39522	0.38158	0.36808	0.35472	0.34150	0.32842
.16	0.45556	0.44149	0.42755	0.41373	0.40003	0.38646	0.37303	0.35972	0.34656	0.33354	0.32067
.17	0.44583	0.43197	0.41822	0.40460	0.39110	0.37774	0.36450	0.35140	0.33843	0.32561	0.31294
.18	0.43614	0.42248	0.40893	0.39551	0.38221	0.36905	0.35601	0.34311	0.33034	0.31772	0.30525
.19	0.42648	0.41302	0.39968	0.38646	0.37336	0.36039	0.34755	0.33485	0.32229	0.30987	0.29759
.20	0.41687	0.40361	0.39046	0.37744	0.36454	0.35177	0.33914	0.32664	0.31427	0.30205	0.28998
.21	0.40729	0.39423	0.38129	0.36846	0.35577	0.34320	0.33076	0.31846	0.30630	0.29428	0.28240
.22	0.39776	0.38490	0.37215	0.35953	0.34704	0.33467	0.32243	0.31033	0.29837	0.28655	0.27487
.23	0.38827	0.37561	0.36307	0.35065	0.33835	0.32618	0.31414	0.30224	0.29048	0.27886	0.26738
.24	0.37883	0.36637	0.35403	0.34181	0.32971	0.31774	0.30590	0.29420	0.28264	0.27122	0.25994
.25	0.36944	0.35718	0.34504	0.33302	0.32112	0.30935	0.29771	0.28621	0.27485	0.26363	0.25255
.26	0.36010	0.34804	0.33610	0.32428	0.31258	0.30101	0.28957	0.27827	0.26711	0.25609	0.24521
.27	0.35082	0.33896	0.32721	0.31559	0.30409	0.29273	0.28149	0.27039	0.25942	0.24860	0.23793
.28	0.34159	0.32993	0.31838	0.30696	0.29567	0.28450	0.27346	0.26256	0.25180	0.24118	0.23070
.29	0.33242	0.32096	0.30961	0.29839	0.28730	0.27633	0.26549	0.25479	0.24423	0.23381	0.22353
.30	0.32331	0.31205	0.30090	0.28988	0.27899	0.26822	0.25758	0.24708	0.23672	0.22650	0.21642
.31	0.31426	0.30320	0.29226	0.28144	0.27074	0.26017	0.24973	0.23943	0.22927	0.21925	0.20937
.32	0.30528	0.29442	0.28368	0.27305	0.26256	0.25219	0.24195	0.23185	0.22189	0.21207	0.20239
.33	0.29637	0.28571	0.27516	0.26474	0.25444	0.24427	0.23424	0.22434	0.21457	0.20495	0.19548
.34	0.28752	0.27706	0.26672	0.25650	0.24640	0.23643	0.22659	0.21689	0.20733	0.19791	0.18863
.35	0.27875	0.26849	0.25835	0.24832	0.23843	0.22866	0.21902	0.20952	0.20016	0.19094	0.18186
.36	0.27005	0.25999	0.25005	0.24023	0.23053	0.22096	0.21152	0.20222	0.19306	0.18404	0.17516
.37	0.26143	0.25157	0.24183	0.23221	0.22271	0.21334	0.20410	0.19500	0.18604	0.17722	0.16854
.38	0.25289	0.24323	0.23369	0.22427	0.21497	0.20580	0.19676	0.18786	0.17910	0.17048	0.16200
.39	0.24444	0.23497	0.22563	0.21641	0.20731	0.19834	0.18951	0.18080	0.17224	0.16382	0.15555
.40	0.23606	0.22680	0.21766	0.20863	0.19974	0.19097	0.18233	0.17383	0.16547	0.15725	0.14917
.41	0.22778	0.21871	0.20977	0.20095	0.19225	0.18368	0.17525	0.16694	0.15878	0.15076	0.14289
.42	0.21958	0.21072	0.20197	0.19335	0.18485	0.17649	0.16825	0.16015	0.15218	0.14436	0.13669
.43	0.21148	0.20281	0.19427	0.18585	0.17755	0.16938	0.16135	0.15344	0.14568	0.13806	0.13059
.44	0.20347	0.19500	0.18666	0.17844	0.17034	0.16237	0.15454	0.14684	0.13927	0.13185	0.12458
.45	0.19556	0.18729	0.17915	0.17113	0.16323	0.15546	0.14783	0.14032	0.13296	0.12574	0.11867

V	U 0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
.45	0.19556	0.18729	0.17915	0.17113	0.16323	0.15546	0.14783	0.14032	0.13296	0.12574	0.11867
.46	0.18775	0.17968	0.17174	0.16392	0.15622	0.14865	0.14122	0.13392	0.12675	0.11973	0.11286
.47	0.18004	0.17218	0.16443	0.15681	0.14932	0.14195	0.13471	0.12761	0.12065	0.11383	0.10715
.48	0.17244	0.16478	0.15724	0.14981	0.14252	0.13535	0.12831	0.12141	0.11465	0.10803	0.10155
.49	0.16495	0.15749	0.15015	0.14292	0.13583	0.12886	0.12202	0.11532	0.10876	0.10234	0.09606
.50	0.15757	0.15031	0.14317	0.13615	0.12925	0.12248	0.11584	0.10934	0.10298	0.09676	0.09068
.51	0.15031	0.14325	0.13631	0.12948	0.12279	0.11622	0.10978	0.10348	0.09732	0.09130	0.08542
.52	0.14317	0.13631	0.12956	0.12294	0.11644	0.11007	0.10384	0.09774	0.09177	0.08595	0.08028
.53	0.13615	0.12948	0.12294	0.11652	0.11022	0.10405	0.09802	0.09211	0.08635	0.08073	0.07526
.54	0.12925	0.12279	0.11644	0.11022	0.10412	0.09816	0.09232	0.08662	0.08105	0.07563	0.07036
.55	0.12248	0.11622	0.11007	0.10405	0.09816	0.09239	0.08675	0.08125	0.07589	0.07066	0.06559
.56	0.11584	0.10978	0.10384	0.09802	0.09232	0.08675	0.08131	0.07601	0.07085	0.06583	0.06095
.57	0.10934	0.10348	0.09774	0.09211	0.08662	0.08125	0.07601	0.07091	0.06595	0.06113	0.05645
.58	0.10298	0.09732	0.09177	0.08635	0.08105	0.07589	0.07085	0.06595	0.06118	0.05656	0.05209
.59	0.09676	0.09130	0.08595	0.08073	0.07563	0.07066	0.06583	0.06113	0.05656	0.05214	0.04787
.60	0.09068	0.08542	0.08028	0.07526	0.07036	0.06559	0.06095	0.05645	0.05209	0.04787	0.04379
.61	0.08476	0.07970	0.07475	0.06993	0.06523	0.06067	0.05623	0.05193	0.04776	0.04374	0.03987
.62	0.07899	0.07413	0.06938	0.06476	0.06026	0.05590	0.05166	0.04756	0.04359	0.03977	0.03610
.63	0.07338	0.06871	0.06417	0.05975	0.05545	0.05128	0.04725	0.04334	0.03958	0.03596	0.03249
.64	0.06793	0.06346	0.05912	0.05490	0.05080	0.04683	0.04300	0.03929	0.03573	0.03231	0.02904
.65	0.06264	0.05838	0.05424	0.05022	0.04632	0.04255	0.03891	0.03541	0.03205	0.02883	0.02575
.66	0.05753	0.05347	0.04952	0.04570	0.04201	0.03844	0.03500	0.03170	0.02854	0.02552	0.02264
.67	0.05259	0.04873	0.04499	0.04137	0.03787	0.03450	0.03126	0.02816	0.02520	0.02238	0.01970
.68	0.04784	0.04418	0.04063	0.03721	0.03391	0.03074	0.02771	0.02481	0.02204	0.01942	0.01695
.69	0.04327	0.03981	0.03646	0.03324	0.03014	0.02717	0.02434	0.02164	0.01907	0.01665	0.01438
.70	0.03889	0.03563	0.03248	0.02946	0.02656	0.02379	0.02116	0.01866	0.01629	0.01407	0.01200
.71	0.03470	0.03164	0.02870	0.02588	0.02318	0.02061	0.01817	0.01587	0.01371	0.01169	0.00981
.72	0.03072	0.02786	0.02512	0.02249	0.02000	0.01763	0.01539	0.01329	0.01133	0.00951	0.00783
.73	0.02695	0.02428	0.02174	0.01932	0.01702	0.01485	0.01282	0.01091	0.00915	0.00753	0.00606
.74	0.02339	0.02092	0.01858	0.01636	0.01426	0.01229	0.01046	0.00875	0.00719	0.00577	0.00450
.75	0.02004	0.01778	0.01564	0.01362	0.01172	0.00995	0.00831	0.00681	0.00545	0.00423	0.00315
.76	0.01693	0.01487	0.01292	0.01110	0.00941	0.00784	0.00640	0.00510	0.00394	0.00291	0.00204
.77	0.01405	0.01219	0.01044	0.00882	0.00733	0.00596	0.00472	0.00362	0.00266	0.00183	0.00116
.78	0.01141	0.00975	0.00821	0.00678	0.00549	0.00432	0.00328	0.00238	0.00162	0.00100	0.00052
.79	0.00902	0.00756	0.00622	0.00499	0.00390	0.00293	0.00209	0.00139	0.00083	0.00041	0.00013
.80	0.00689	0.00563	0.00448	0.00346	0.00256	0.00180	0.00116	0.00066	0.00029	0.00007	0.00000
.81	0.00502	0.00396	0.00302	0.00220	0.00150	0.00093	0.00049	0.00019	0.00003		
.82	0.00344	0.00257	0.00183	0.00121	0.00071	0.00034	0.00011	0.00000			
.83	0.00213	0.00147	0.00093	0.00051	0.00021	0.00004					
.84	0.00113	0.00067	0.00032	0.00010	0.00000						
.85	0.00043	0.00017	0.00003								
.86	0.00006	0.00000									

V	U 0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
.00	0.44730	0.43137	0.41560	0.39999	0.38454	0.36925	0.35414	0.33921	0.32445	0.30988	0.29550
.01	0.43930	0.42357	0.40800	0.39259	0.37734	0.36225	0.34734	0.33261	0.31805	0.30368	0.28950
.02	0.43130	0.41577	0.40040	0.38519	0.37014	0.35526	0.34054	0.32601	0.31165	0.29748	0.28350
.03	0.42330	0.40798	0.39281	0.37780	0.36295	0.34826	0.33375	0.31941	0.30526	0.29129	0.27751
.04	0.41532	0.40019	0.38522	0.37041	0.35576	0.34128	0.32696	0.31283	0.29887	0.28510	0.27152
.05	0.40734	0.39241	0.37764	0.36303	0.34858	0.33430	0.32018	0.30625	0.29249	0.27892	0.26554
.06	0.39937	0.38464	0.37007	0.35566	0.34141	0.32733	0.31341	0.29968	0.28612	0.27275	0.25957
.07	0.39141	0.37689	0.36251	0.34830	0.33425	0.32037	0.30666	0.29312	0.27976	0.26659	0.25361
.08	0.38347	0.36914	0.35497	0.34096	0.32711	0.31343	0.29991	0.28658	0.27342	0.26045	0.24767
.09	0.37554	0.36141	0.34744	0.33363	0.31998	0.30650	0.29319	0.28005	0.26709	0.25432	0.24174
.10	0.36763	0.35370	0.33993	0.32632	0.31287	0.29959	0.28648	0.27354	0.26078	0.24821	0.23583
.11	0.35974	0.34602	0.33244	0.31903	0.30578	0.29270	0.27979	0.26705	0.25449	0.24212	0.22994
.12	0.35187	0.33835	0.32498	0.31177	0.29872	0.28583	0.27312	0.26058	0.24823	0.23606	0.22408
.13	0.34403	0.33071	0.31753	0.30452	0.29167	0.27899	0.26648	0.25414	0.24198	0.23001	0.21823
.14	0.33621	0.32309	0.31012	0.29731	0.28466	0.27217	0.25986	0.24772	0.23577	0.22400	0.21242
.15	0.32842	0.31550	0.30273	0.29012	0.27767	0.26538	0.25327	0.24133	0.22958	0.21801	0.20663
.16	0.32067	0.30794	0.29537	0.28296	0.27071	0.25863	0.24671	0.23498	0.22342	0.21205	0.20087
.17	0.31294	0.30042	0.28805	0.27583	0.26378	0.25190	0.24019	0.22865	0.21729	0.20612	0.19514
.18	0.30525	0.29292	0.28075	0.26874	0.25689	0.24521	0.23370	0.22236	0.21120	0.20023	0.18945
.19	0.29759	0.28547	0.27350	0.26169	0.25004	0.23855	0.22724	0.21610	0.20515	0.19438	0.18380
.20	0.28998	0.27805	0.26628	0.25467	0.24322	0.23194	0.22083	0.20989	0.19913	0.18856	0.17818
.21	0.28240	0.27068	0.25911	0.24770	0.23645	0.22536	0.21445	0.20371	0.19316	0.18279	0.17261
.22	0.27487	0.26335	0.25198	0.24076	0.22971	0.21883	0.20812	0.19758	0.18723	0.17705	0.16707
.23	0.26738	0.25606	0.24489	0.23388	0.22303	0.21234	0.20183	0.19149	0.18134	0.17137	0.16159
.24	0.25994	0.24882	0.23785	0.22704	0.21639	0.20590	0.19559	0.18545	0.17550	0.16573	0.15615
.25	0.25255	0.24163	0.23086	0.22025	0.20980	0.19951	0.18940	0.17946	0.16971	0.16014	0.15076
.26	0.24521	0.23449	0.22392	0.21351	0.20326	0.19317	0.18326	0.17353	0.16397	0.15460	0.14542
.27	0.23793	0.22741	0.21704	0.20682	0.19677	0.18689	0.17718	0.16764	0.15828	0.14911	0.14013
.28	0.23070	0.22038	0.21021	0.20019	0.19034	0.18066	0.17115	0.16181	0.15266	0.14368	0.13490
.29	0.22353	0.21341	0.20344	0.19362	0.18397	0.17449	0.16518	0.15604	0.14708	0.13831	0.12973
.30	0.21642	0.20650	0.19673	0.18711	0.17766	0.16838	0.15927	0.15033	0.14158	0.13300	0.12462
.31	0.20937	0.19965	0.19008	0.18067	0.17142	0.16233	0.15342	0.14468	0.13613	0.12776	0.11958
.32	0.20239	0.19287	0.18350	0.17429	0.16524	0.15635	0.14764	0.13910	0.13075	0.12258	0.11460
.33	0.19548	0.18615	0.17698	0.16797	0.15912	0.15044	0.14192	0.13359	0.12543	0.11746	0.10968
.34	0.18863	0.17951	0.17054	0.16173	0.15308	0.14459	0.13628	0.12814	0.12019	0.11242	0.10484
.35	0.18186	0.17294	0.16417	0.15555	0.14710	0.13882	0.13071	0.12277	0.11502	0.10745	0.10007
.36	0.17516	0.16644	0.15787	0.14946	0.14121	0.13312	0.12521	0.11747	0.10992	0.10255	0.09537
.37	0.16854	0.16002	0.15165	0.14344	0.13539	0.12750	0.11979	0.11225	0.10490	0.09773	0.09075
.38	0.16200	0.15368	0.14551	0.13750	0.12965	0.12196	0.11445	0.10711	0.09996	0.09299	0.08621
.39	0.15555	0.14742	0.13945	0.13164	0.12399	0.11651	0.10919	0.10206	0.09510	0.08833	0.08175
.40	0.14917	0.14125	0.13348	0.12587	0.11842	0.11113	0.10402	0.09708	0.09033	0.08376	0.07738

V \ U	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
.40	0.14917	0.14125	0.13348	0.12587	0.11842	0.11113	0.10402	0.09708	0.09033	0.08376	0.07738
.41	0.14289	0.13516	0.12759	0.12018	0.11293	0.10585	0.09893	0.09220	0.08564	0.07927	0.07309
.42	0.13669	0.12917	0.12180	0.11458	0.10753	0.10065	0.09394	0.08740	0.08104	0.07487	0.06889
.43	0.13059	0.12326	0.11609	0.10908	0.10223	0.09555	0.08903	0.08270	0.07654	0.07057	0.06479
.44	0.12458	0.11745	0.11048	0.10367	0.09702	0.09054	0.08422	0.07809	0.07213	0.06636	0.06078
.45	0.11867	0.11174	0.10497	0.09836	0.09191	0.08563	0.07951	0.07358	0.06782	0.06225	0.05687
.46	0.11286	0.10613	0.09956	0.09315	0.08690	0.08082	0.07490	0.06917	0.06361	0.05824	0.05306
.47	0.10715	0.10063	0.09426	0.08804	0.08199	0.07611	0.07040	0.06486	0.05951	0.05433	0.04935
.48	0.10155	0.09523	0.08906	0.08304	0.07719	0.07151	0.06600	0.06066	0.05551	0.05054	0.04576
.49	0.09606	0.08994	0.08397	0.07815	0.07250	0.06702	0.06171	0.05657	0.05162	0.04685	0.04227
.50	0.09068	0.08476	0.07899	0.07338	0.06793	0.06264	0.05753	0.05259	0.04784	0.04327	0.03889
.51	0.08542	0.07970	0.07413	0.06871	0.06346	0.05838	0.05347	0.04873	0.04418	0.03981	0.03563
.52	0.08028	0.07475	0.06938	0.06417	0.05912	0.05424	0.04952	0.04499	0.04063	0.03646	0.03248
.53	0.07526	0.06993	0.06476	0.05975	0.05490	0.05022	0.04570	0.04137	0.03721	0.03324	0.02946
.54	0.07036	0.06523	0.06026	0.05545	0.05080	0.04632	0.04201	0.03787	0.03391	0.03014	0.02656
.55	0.06559	0.06067	0.05590	0.05128	0.04683	0.04255	0.03844	0.03450	0.03074	0.02717	0.02379
.56	0.06095	0.05623	0.05166	0.04725	0.04300	0.03891	0.03500	0.03126	0.02771	0.02434	0.02116
.57	0.05645	0.05193	0.04756	0.04334	0.03929	0.03541	0.03170	0.02816	0.02481	0.02164	0.01866
.58	0.05209	0.04776	0.04359	0.03958	0.03573	0.03205	0.02854	0.02520	0.02204	0.01907	0.01629
.59	0.04787	0.04374	0.03977	0.03596	0.03231	0.02883	0.02552	0.02238	0.01942	0.01665	0.01407
.60	0.04379	0.03987	0.03610	0.03249	0.02904	0.02575	0.02264	0.01970	0.01695	0.01438	0.01200
.61	0.03987	0.03615	0.03258	0.02916	0.02591	0.02283	0.01992	0.01718	0.01462	0.01225	0.01007
.62	0.03610	0.03258	0.02920	0.02599	0.02294	0.02006	0.01735	0.01481	0.01245	0.01028	0.00830
.63	0.03249	0.02916	0.02599	0.02298	0.02013	0.01745	0.01493	0.01260	0.01044	0.00847	0.00669
.64	0.02904	0.02591	0.02294	0.02013	0.01748	0.01500	0.01268	0.01055	0.00859	0.00682	0.00524
.65	0.02575	0.02283	0.02006	0.01745	0.01500	0.01271	0.01060	0.00866	0.00691	0.00534	0.00396
.66	0.02264	0.01992	0.01735	0.01493	0.01268	0.01060	0.00869	0.00695	0.00540	0.00402	0.00284
.67	0.01970	0.01718	0.01481	0.01260	0.01055	0.00866	0.00695	0.00541	0.00406	0.00289	0.00191
.68	0.01695	0.01462	0.01245	0.01044	0.00859	0.00691	0.00540	0.00406	0.00290	0.00193	0.00115
.69	0.01438	0.01225	0.01028	0.00847	0.00682	0.00534	0.00402	0.00289	0.00193	0.00116	0.00058
.70	0.01200	0.01007	0.00830	0.00669	0.00524	0.00396	0.00284	0.00191	0.00115	0.00058	0.00020
.71	0.00981	0.00809	0.00652	0.00511	0.00386	0.00277	0.00186	0.00112	0.00057	0.00020	0.00002
.72	0.00783	0.00631	0.00494	0.00372	0.00267	0.00179	0.00108	0.00054	0.00019	0.00002	
.73	0.00606	0.00473	0.00356	0.00255	0.00170	0.00102	0.00050	0.00017	0.00001		
.74	0.00450	0.00337	0.00240	0.00159	0.00094	0.00046	0.00014	0.00001			
.75	0.00315	0.00223	0.00146	0.00085	0.00040	0.00011	0.00000				
.76	0.00204	0.00132	0.00075	0.00033	0.00008						
.77	0.00116	0.00064	0.00027	0.00005							
.78	0.00052	0.00020	0.00003								
.79	0.00013	0.00001									
.80	0.00000										

V	U 0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
.00	0.29550	0.28131	0.26733	0.25356	0.24000	0.22666	0.21354	0.20066	0.18802	0.17563	0.16350
.01	0.28950	0.27552	0.26173	0.24816	0.23480	0.22166	0.20874	0.19606	0.18362	0.17143	0.15950
.02	0.28350	0.26972	0.25614	0.24276	0.22960	0.21666	0.20394	0.19146	0.17923	0.16724	0.15550
.03	0.27751	0.26392	0.25054	0.23737	0.22441	0.21166	0.19915	0.18687	0.17483	0.16304	0.15151
.04	0.27152	0.25814	0.24495	0.23198	0.21922	0.20668	0.19436	0.18228	0.17044	0.15885	0.14752
.05	0.26554	0.25236	0.23937	0.22660	0.21404	0.20170	0.18958	0.17770	0.16606	0.15467	0.14354
.06	0.25957	0.24659	0.23380	0.22123	0.20887	0.19673	0.18481	0.17313	0.16169	0.15050	0.13957
.07	0.25361	0.24083	0.22825	0.21587	0.20371	0.19177	0.18006	0.16858	0.15734	0.14635	0.13562
.08	0.24767	0.23509	0.22270	0.21053	0.19857	0.18683	0.17531	0.16403	0.15299	0.14220	0.13167
.09	0.24174	0.22936	0.21718	0.20520	0.19344	0.18190	0.17058	0.15950	0.14867	0.13808	0.12774
.10	0.23583	0.22365	0.21167	0.19989	0.18833	0.17699	0.16588	0.15500	0.14436	0.13397	0.12383
.11	0.22994	0.21796	0.20618	0.19460	0.18324	0.17210	0.16119	0.15051	0.14007	0.12988	0.11995
.12	0.22408	0.21229	0.20071	0.18934	0.17817	0.16723	0.15652	0.14604	0.13580	0.12581	0.11608
.13	0.21823	0.20665	0.19527	0.18409	0.17313	0.16239	0.15188	0.14160	0.13156	0.12177	0.11224
.14	0.21242	0.20103	0.18985	0.17888	0.16811	0.15757	0.14726	0.13718	0.12734	0.11775	0.10842
.15	0.20663	0.19544	0.18446	0.17369	0.16313	0.15278	0.14267	0.13279	0.12315	0.11376	0.10463
.16	0.20087	0.18989	0.17910	0.16853	0.15817	0.14803	0.13811	0.12843	0.11899	0.10980	0.10087
.17	0.19514	0.18436	0.17378	0.16340	0.15324	0.14330	0.13359	0.12411	0.11487	0.10588	0.09715
.18	0.18945	0.17887	0.16849	0.15831	0.14835	0.13861	0.12910	0.11981	0.11078	0.10199	0.09345
.19	0.18380	0.17341	0.16323	0.15326	0.14350	0.13395	0.12464	0.11556	0.10672	0.09813	0.08980
.20	0.17818	0.16800	0.15802	0.14824	0.13868	0.12934	0.12022	0.11134	0.10271	0.09432	0.08618
.21	0.17261	0.16262	0.15284	0.14327	0.13390	0.12476	0.11585	0.10717	0.09873	0.09054	0.08261
.22	0.16707	0.15729	0.14771	0.13833	0.12917	0.12023	0.11152	0.10304	0.09480	0.08681	0.07908
.23	0.16159	0.15200	0.14262	0.13345	0.12449	0.11574	0.10723	0.09895	0.09091	0.08312	0.07559
.24	0.15615	0.14676	0.13758	0.12861	0.11985	0.11130	0.10299	0.09491	0.08707	0.07948	0.07215
.25	0.15076	0.14157	0.13259	0.12382	0.11526	0.10691	0.09880	0.09092	0.08328	0.07589	0.06876
.26	0.14542	0.13643	0.12765	0.11908	0.11072	0.10258	0.09466	0.08698	0.07954	0.07235	0.06542
.27	0.14013	0.13135	0.12277	0.11439	0.10623	0.09829	0.09058	0.08310	0.07586	0.06887	0.06214
.28	0.13490	0.12632	0.11794	0.10976	0.10180	0.09406	0.08655	0.07927	0.07223	0.06544	0.05891
.29	0.12973	0.12135	0.11317	0.10519	0.09743	0.08989	0.08258	0.07550	0.06866	0.06207	0.05574
.30	0.12462	0.11644	0.10846	0.10068	0.09312	0.08578	0.07867	0.07179	0.06515	0.05876	0.05263
.31	0.11958	0.11159	0.10381	0.09624	0.08888	0.08173	0.07482	0.06814	0.06170	0.05551	0.04958
.32	0.11460	0.10681	0.09923	0.09185	0.08469	0.07775	0.07104	0.06456	0.05832	0.05233	0.04660
.33	0.10968	0.10210	0.09472	0.08754	0.08058	0.07384	0.06732	0.06104	0.05501	0.04922	0.04368
.34	0.10484	0.09745	0.09027	0.08330	0.07654	0.06999	0.06368	0.05760	0.05176	0.04617	0.04084
.35	0.10007	0.09288	0.08590	0.07912	0.07256	0.06622	0.06011	0.05423	0.04859	0.04320	0.03807

V	U 0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
.35	0.10007	0.09288	0.08590	0.07912	0.07256	0.06622	0.06011	0.05423	0.04859	0.04320	0.03807
.36	0.09537	0.08838	0.08160	0.07503	0.06867	0.06253	0.05661	0.05093	0.04549	0.04030	0.03537
.37	0.09075	0.08396	0.07738	0.07101	0.06485	0.05891	0.05319	0.04771	0.04247	0.03748	0.03275
.38	0.08621	0.07962	0.07324	0.06707	0.06111	0.05536	0.04985	0.04457	0.03953	0.03474	0.03021
.39	0.08175	0.07537	0.06918	0.06321	0.05745	0.05191	0.04659	0.04151	0.03667	0.03208	0.02775
.40	0.07738	0.07119	0.06521	0.05944	0.05387	0.04853	0.04342	0.03854	0.03390	0.02951	0.02538
.41	0.07309	0.06711	0.06132	0.05575	0.05039	0.04525	0.04033	0.03565	0.03121	0.02702	0.02309
.42	0.06889	0.06311	0.05753	0.05215	0.04699	0.04205	0.03734	0.03286	0.02862	0.02463	0.02090
.43	0.06479	0.05921	0.05382	0.04865	0.04369	0.03895	0.03443	0.03015	0.02611	0.02232	0.01879
.44	0.06078	0.05540	0.05021	0.04524	0.04048	0.03594	0.03162	0.02754	0.02370	0.02012	0.01678
.45	0.05687	0.05169	0.04670	0.04193	0.03737	0.03303	0.02891	0.02503	0.02139	0.01800	0.01487
.46	0.05306	0.04808	0.04329	0.03872	0.03436	0.03022	0.02630	0.02262	0.01918	0.01600	0.01306
.47	0.04935	0.04457	0.03999	0.03561	0.03145	0.02751	0.02380	0.02032	0.01708	0.01409	0.01136
.48	0.04576	0.04117	0.03679	0.03261	0.02865	0.02491	0.02140	0.01812	0.01508	0.01229	0.00976
.49	0.04227	0.03788	0.03370	0.02972	0.02596	0.02242	0.01911	0.01603	0.01319	0.01060	0.00827
.50	0.03889	0.03470	0.03072	0.02695	0.02339	0.02004	0.01693	0.01405	0.01141	0.00902	0.00689
.51	0.03563	0.03164	0.02786	0.02428	0.02092	0.01778	0.01487	0.01219	0.00975	0.00756	0.00563
.52	0.03248	0.02870	0.02512	0.02174	0.01858	0.01564	0.01292	0.01044	0.00821	0.00622	0.00448
.53	0.02946	0.02588	0.02249	0.01932	0.01636	0.01362	0.01110	0.00882	0.00678	0.00499	0.00346
.54	0.02656	0.02318	0.02000	0.01702	0.01426	0.01172	0.00941	0.00733	0.00549	0.00390	0.00256
.55	0.02379	0.02061	0.01763	0.01485	0.01229	0.00995	0.00784	0.00596	0.00432	0.00293	0.00180
.56	0.02116	0.01817	0.01539	0.01282	0.01046	0.00831	0.00640	0.00472	0.00328	0.00209	0.00116
.57	0.01866	0.01587	0.01329	0.01091	0.00875	0.00681	0.00510	0.00362	0.00238	0.00139	0.00066
.58	0.01629	0.01371	0.01133	0.00915	0.00719	0.00545	0.00394	0.00266	0.00162	0.00083	0.00029
.59	0.01407	0.01169	0.00951	0.00753	0.00577	0.00423	0.00291	0.00183	0.00100	0.00041	0.00007
.60	0.01200	0.00981	0.00783	0.00606	0.00450	0.00315	0.00204	0.00116	0.00052	0.00013	0.00000
.61	0.01007	0.00809	0.00631	0.00473	0.00337	0.00223	0.00132	0.00064	0.00020	0.00001	
.62	0.00830	0.00652	0.00494	0.00356	0.00240	0.00146	0.00075	0.00027	0.00003		
.63	0.00669	0.00511	0.00372	0.00255	0.00159	0.00085	0.00033	0.00005			
.64	0.00524	0.00386	0.00267	0.00170	0.00094	0.00040	0.00008				
.65	0.00396	0.00277	0.00179	0.00102	0.00046	0.00011					
.66	0.00284	0.00186	0.00108	0.00050	0.00014	0.00000					
.67	0.00191	0.00112	0.00054	0.00017	0.00001						
.68	0.00115	0.00057	0.00019	0.00001							
.69	0.00058	0.00020	0.00002								
.70	0.00020	0.00002									
.71	0.00002										

F(U,V)   U=.80-.90
                                                                         V=.00-.30

V	U 0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
.00	0.16350	0.15164	0.14005	0.12875	0.11774	0.10705	0.09667	0.08664	0.07696	0.06765	0.05873
.01	0.15950	0.14784	0.13645	0.12535	0.11454	0.10405	0.09387	0.08404	0.07456	0.06545	0.05673
.02	0.15550	0.14404	0.13285	0.12195	0.11134	0.10105	0.09108	0.08144	0.07216	0.06325	0.05473
.03	0.15151	0.14025	0.12926	0.11855	0.10815	0.09805	0.08828	0.07885	0.06977	0.06106	0.05273
.04	0.14752	0.13646	0.12567	0.11517	0.10496	0.09507	0.08550	0.07626	0.06738	0.05887	0.05075
.05	0.14354	0.13268	0.12209	0.11179	0.10178	0.09209	0.08272	0.07368	0.06500	0.05669	0.04877
.06	0.13957	0.12891	0.11852	0.10842	0.09861	0.08912	0.07995	0.07111	0.06263	0.05452	0.04680
.07	0.13562	0.12515	0.11496	0.10506	0.09545	0.08616	0.07719	0.06855	0.06027	0.05236	0.04484
.08	0.13167	0.12141	0.11142	0.10172	0.09231	0.08322	0.07444	0.06601	0.05793	0.05022	0.04290
.09	0.12774	0.11768	0.10789	0.09839	0.08918	0.08029	0.07172	0.06348	0.05560	0.04809	0.04097
.10	0.12383	0.11397	0.10438	0.09508	0.08607	0.07738	0.06901	0.06097	0.05329	0.04598	0.03906
.11	0.11995	0.11028	0.10089	0.09179	0.08299	0.07449	0.06632	0.05848	0.05100	0.04389	0.03717
.12	0.11608	0.10661	0.09742	0.08852	0.07992	0.07162	0.06365	0.05602	0.04873	0.04182	0.03530
.13	0.11224	0.10297	0.09398	0.08528	0.07687	0.06878	0.06101	0.05357	0.04649	0.03978	0.03346
.14	0.10842	0.09935	0.09056	0.08206	0.07386	0.06596	0.05839	0.05116	0.04427	0.03776	0.03164
.15	0.10463	0.09576	0.08718	0.07887	0.07087	0.06317	0.05580	0.04877	0.04209	0.03578	0.02985
.16	0.10087	0.09221	0.08382	0.07572	0.06791	0.06042	0.05324	0.04641	0.03993	0.03382	0.02810
.17	0.09715	0.08868	0.08049	0.07259	0.06499	0.05769	0.05072	0.04408	0.03780	0.03189	0.02637
.18	0.09345	0.08519	0.07720	0.06950	0.06209	0.05500	0.04823	0.04179	0.03571	0.03000	0.02468
.19	0.08980	0.08173	0.07395	0.06644	0.05924	0.05234	0.04577	0.03954	0.03366	0.02815	0.02302
.20	0.08618	0.07832	0.07073	0.06343	0.05642	0.04973	0.04336	0.03732	0.03164	0.02633	0.02141
.21	0.08261	0.07494	0.06755	0.06045	0.05365	0.04715	0.04098	0.03515	0.02967	0.02455	0.01983
.22	0.07908	0.07161	0.06442	0.05752	0.05092	0.04462	0.03865	0.03301	0.02773	0.02282	0.01830
.23	0.07559	0.06832	0.06134	0.05463	0.04823	0.04213	0.03636	0.03093	0.02585	0.02113	0.01681
.24	0.07215	0.06508	0.05830	0.05179	0.04559	0.03969	0.03412	0.02889	0.02401	0.01949	0.01537
.25	0.06876	0.06189	0.05531	0.04900	0.04300	0.03730	0.03193	0.02690	0.02222	0.01790	0.01398
.26	0.06542	0.05876	0.05237	0.04626	0.04046	0.03497	0.02979	0.02496	0.02048	0.01637	0.01265
.27	0.06214	0.05567	0.04948	0.04358	0.03798	0.03268	0.02771	0.02307	0.01879	0.01488	0.01136
.28	0.05891	0.05264	0.04665	0.04095	0.03555	0.03045	0.02568	0.02124	0.01716	0.01345	0.01013
.29	0.05574	0.04967	0.04388	0.03838	0.03318	0.02828	0.02371	0.01947	0.01559	0.01208	0.00896
.30	0.05263	0.04676	0.04117	0.03587	0.03087	0.02617	0.02180	0.01776	0.01408	0.01077	0.00785

38

V	U 0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
.30	0.05263	0.04676	0.04117	0.03587	0.03087	0.02617	0.02180	0.01776	0.01408	0.01077	0.00785
.31	0.04958	0.04391	0.03853	0.03342	0.02862	0.02412	0.01995	0.01612	0.01264	0.00952	0.00680
.32	0.04660	0.04113	0.03594	0.03104	0.02644	0.02214	0.01817	0.01454	0.01125	0.00834	0.00582
.33	0.04368	0.03842	0.03343	0.02873	0.02432	0.02023	0.01646	0.01302	0.00994	0.00723	0.00491
.34	0.04084	0.03577	0.03099	0.02648	0.02228	0.01838	0.01481	0.01158	0.00870	0.00618	0.00406
.35	0.03807	0.03320	0.02861	0.02431	0.02031	0.01661	0.01324	0.01021	0.00752	0.00521	0.00329
.36	0.03537	0.03071	0.02632	0.02221	0.01841	0.01492	0.01174	0.00891	0.00643	0.00432	0.00260
.37	0.03275	0.02829	0.02410	0.02019	0.01659	0.01329	0.01032	0.00769	0.00541	0.00350	0.00198
.38	0.03021	0.02594	0.02196	0.01825	0.01485	0.01175	0.00898	0.00655	0.00447	0.00276	0.00143
.39	0.02775	0.02369	0.01990	0.01640	0.01319	0.01030	0.00772	0.00549	0.00361	0.00210	0.00098
.40	0.02538	0.02151	0.01792	0.01462	0.01162	0.00892	0.00655	0.00452	0.00283	0.00152	0.00060
.41	0.02309	0.01943	0.01604	0.01294	0.01013	0.00764	0.00546	0.00363	0.00215	0.00104	0.00032
.42	0.02090	0.01743	0.01424	0.01134	0.00874	0.00644	0.00447	0.00283	0.00155	0.00064	0.00012
.43	0.01879	0.01553	0.01254	0.00984	0.00743	0.00534	0.00356	0.00213	0.00105	0.00034	0.00002
.44	0.01678	0.01372	0.01093	0.00843	0.00622	0.00433	0.00276	0.00152	0.00064	0.00013	
.45	0.01487	0.01201	0.00942	0.00712	0.00511	0.00342	0.00205	0.00101	0.00033	0.00002	
.46	0.01306	0.01040	0.00801	0.00591	0.00410	0.00261	0.00144	0.00060	0.00012		
.47	0.01136	0.00889	0.00670	0.00480	0.00320	0.00190	0.00093	0.00030	0.00001		
.48	0.00976	0.00749	0.00550	0.00380	0.00240	0.00130	0.00053	0.00010			
.49	0.00827	0.00620	0.00441	0.00291	0.00171	0.00081	0.00024	0.00001			
.50	0.00689	0.00502	0.00344	0.00213	0.00113	0.00043	0.00006				
.51	0.00563	0.00396	0.00257	0.00147	0.00067	0.00017	0.00000				
.52	0.00448	0.00302	0.00183	0.00093	0.00032	0.00003					
.53	0.00346	0.00220	0.00121	0.00051	0.00010						
.54	0.00256	0.00150	0.00071	0.00021	0.00000						
.55	0.00180	0.00093	0.00034	0.00004							
.56	0.00116	0.00049	0.00011								
.57	0.00066	0.00019	0.00000								
.58	0.00029	0.00003									
.59	0.00007										
.60	0.00000										

V	U 0.90	0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00
.00	0.05873	0.05022	0.04215	0.03455	0.02746	0.02092	0.01499	0.00975	0.00532	0.00188	0.00000
.01	0.05673	0.04842	0.04055	0.03315	0.02626	0.01992	0.01419	0.00915	0.00492	0.00168	
.02	0.05473	0.04662	0.03895	0.03176	0.02506	0.01893	0.01340	0.00856	0.00452	0.00149	
.03	0.05273	0.04483	0.03736	0.03036	0.02387	0.01793	0.01260	0.00796	0.00413	0.00129	
.04	0.05075	0.04304	0.03577	0.02897	0.02268	0.01694	0.01182	0.00738	0.00374	0.00110	
.05	0.04877	0.04126	0.03419	0.02759	0.02150	0.01596	0.01104	0.00680	0.00336	0.00092	
.06	0.04680	0.03949	0.03262	0.02623	0.02033	0.01500	0.01027	0.00623	0.00299	0.00075	
.07	0.04484	0.03773	0.03107	0.02487	0.01918	0.01404	0.00951	0.00567	0.00263	0.00060	
.08	0.04290	0.03599	0.02952	0.02352	0.01803	0.01309	0.00876	0.00512	0.00229	0.00045	
.09	0.04097	0.03426	0.02799	0.02220	0.01691	0.01217	0.00804	0.00460	0.00196	0.00033	
.10	0.03906	0.03255	0.02648	0.02089	0.01580	0.01126	0.00733	0.00409	0.00165	0.00022	
.11	0.03717	0.03086	0.02500	0.01960	0.01471	0.01037	0.00664	0.00360	0.00136	0.00013	
.12	0.03530	0.02920	0.02353	0.01833	0.01364	0.00950	0.00597	0.00313	0.00109	0.00006	
.13	0.03346	0.02755	0.02209	0.01709	0.01260	0.00866	0.00533	0.00269	0.00085	0.00002	
.14	0.03164	0.02594	0.02067	0.01587	0.01158	0.00784	0.00471	0.00227	0.00063	0.00000	
.15	0.02985	0.02435	0.01928	0.01468	0.01059	0.00705	0.00412	0.00188	0.00045		
.16	0.02810	0.02279	0.01792	0.01352	0.00963	0.00629	0.00356	0.00152	0.00029		
.17	0.02637	0.02126	0.01660	0.01240	0.00871	0.00557	0.00304	0.00120	0.00016		
.18	0.02468	0.01977	0.01530	0.01131	0.00782	0.00488	0.00255	0.00091	0.00007		
.19	0.02302	0.01832	0.01405	0.01025	0.00696	0.00422	0.00209	0.00065	0.00002		
.20	0.02141	0.01690	0.01283	0.00924	0.00614	0.00361	0.00168	0.00044			
.21	0.01983	0.01553	0.01166	0.00826	0.00537	0.00303	0.00130	0.00026			
.22	0.01830	0.01419	0.01053	0.00733	0.00464	0.00250	0.00097	0.00013			
.23	0.01681	0.01291	0.00944	0.00644	0.00395	0.00201	0.00068	0.00004			
.24	0.01537	0.01167	0.00840	0.00560	0.00331	0.00157	0.00044	0.00000			
.25	0.01398	0.01048	0.00741	0.00481	0.00272	0.00118	0.00025				
.26	0.01265	0.00934	0.00647	0.00407	0.00218	0.00084	0.00011				
.27	0.01136	0.00825	0.00559	0.00339	0.00170	0.00056	0.00003				
.28	0.01013	0.00722	0.00476	0.00276	0.00127	0.00033	0.00000				
.29	0.00896	0.00625	0.00399	0.00219	0.00090	0.00016					
.30	0.00785	0.00534	0.00328	0.00168	0.00059	0.00005					
.31	0.00680	0.00450	0.00263	0.00123	0.00034	0.00000					
.32	0.00582	0.00372	0.00205	0.00085	0.00016						
.33	0.00491	0.00300	0.00153	0.00054	0.00004						
.34	0.00406	0.00236	0.00109	0.00029	0.00000						
.35	0.00329	0.00179	0.00072	0.00012							
.36	0.00260	0.00129	0.00042	0.00002							
.37	0.00198	0.00087	0.00020								
.38	0.00143	0.00053	0.00006								
.39	0.00098	0.00027	0.00000								
.40	0.00060	0.00010									
.41	0.00032	0.00001									
.42	0.00012										
.43	0.00002										

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